UNCTAD VIII/3

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

REPORT ON THE PROCEEDINGS OF THE ROUND TABLE ON INTERNATIONAL COMMODITY POLICIES

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INTRODUCTION

1. In the context of the preparations for the eighth session of UNCTAD, a Round Table on International Commodity Policies was held in Moscow, on board the *"Serguei Esenin"*, from 20 to 24 May 1991. The Round Table was organized by the UNCTAD secretariat in collaboration with the Ministry of External Economic Relations of the USSR. "Interferma" was responsible for the logistical aspects of the Round Table. Experts from government, industry and academic circles in their personal capacity, as well as representatives of international commodity organizations, participated. The list of participants is contained in annex I.

2. The purpose of the Round Table was to stimulate new ideas on how to maximize the contribution of the commodity sector to growth and development. In this regard, five issues were addressed, namely:

A. Is continued reliance on commodities as an engine of growth a viable option?

B. What will be the effects on commodities of increased consciousness of environmental and health considerations?

C. Can technology provide a solution to the problems of the commodity sector?

D. How can an enabling environment be created to stimulate the contribution of the commodity sector to development?

E. How can the balance between world supply and demand for commodities be improved?

3. The Secretary-General of UNCTAD opened the proceedings. In drawing attention to the commodity crisis, he stated that this crisis required sound policies in both developed and developing countries and compatibility and consistency within the context of an international commodity policy. In this context, growing awareness of increasing complexities in the international commodity economy on both the demand and supply sides and new dimensions to the commodity problematique, such as environmental and health considerations, might well provide a positive stimulus to the evolution of an international commodity policy. He saw the immediate priorities a: (a) balancing supply and demand of individual commodities at improved real price levels; (b) optimizing the contribution of the commodity sector to development; and (c) ensuring sound management of natural resources in sustainable development utilizing fully the potential of the commodity sector. His statement is contained in annex II.

4. In welcoming the participants to the USSR, the Deputy Minister of the Ministry of External Economic Relations of the USSR stated that stabilization of international commodity markets remained the main focus of his country's commodity policy. He recognized that commodities were important to all countries as producers and importers and especially to developing countries as producers. He drew attention to the fact that the USSR was one of the world's major producers, exporters and importers of agricultural and mineral commodities.

5. In this regard, a detailed presentation on the commodity situation in the USSR, its problems and prospects was made by Igor Kazakov, Director, Raw Materials Department, Market Research Institute, Ministry of External Economic Relations. His paper is contained in annex III. He noted that the limited number of export items was the achilles heel of the USSR. The problems being faced were how to use raw materials to aid restructuring of the economy, what factors would encourage increased processing, how to introduce modern management technology, how to diversify the commodity sector to achieve a self-sustaining economy and how to economize on commodity use. The shortage of foreign currency and the need to service debts had resulted in a decline in certain commodity imports such as maize, sugar, coffee and cocoa and in exports of commodities, particularly oil and non-ferrous ores.

Chapter I

IS CONTINUED RELIANCE ON COMMODITIES AS AN ENGINE OF GROWTH A VIABLE OPTION?

6. Mikhail Pankin, Head of the Group on International Economy in the International Department of the Central Committee of the Communist Party of the Soviet Union, in presenting his paper, contained in annex IV, drew attention to the following points:

(i) The increasing importance of the information revolution and its implications for commodities, including systems for the sale of commodities;

(ii) The increasing commodity imports by developing countries and the varying effects of price increases on these countries as producers or as importers in terms of stimulating or depressing their growth;

(iii) The fact that highly commodity-dependent countries have experienced the lowest rates of GDP and investment growth and the highest rates of inflation;

(iv) The difficulties experienced by new entrants undertaking diversification in gaining market access, and the inefficiency arising from processing behind protective barriers;

(v) The very limited possibilities for marketing commodities independently of large international firms, especially in a North/South context.

7. In the discussion, it was recognized that there could be no general answer as to whether or not commodities could provide a viable engine for growth. The situation differed according to the extent of commodity dependence, the types of commodities relied upon and the size of the domestic economy. Nevertheless, most countries would have to rely on commodities to a significant degree for their economic growth and some of them had little opportunity to diversify out of commodities.

8. There was a need for countries which continued to rely on a very limited number of commodities for their export earnings to diversify. Diversification in the context of domestic markets alone would not be a viable option for many countries and especially those with a small internal market, and thus diversification would have to be export-oriented. However, export markets for the outputs of diversification were difficult to identify as well as to gain access to, and often the response was to remain with traditional commodities and markets. To export, there was a need to co-operate closely with trading partners, *inter alia* through joint ventures. In this regard the internationalization of production and distribution activities by TNCs was an important element to be taken into account.

9. In countries which had successfully diversified their exports, additional activities generally supplemented traditional export activities with the latter continuing to grow but not as fast as the new ones. For several countries, diversification out of commodities into other products or services had occurred but commodity-related activities continued to be important. The different performance of countries needed to be examined in order to determine the factors responsible for cases of success.

10. The increased processing of commodities in developing countries was hindered not only by the lack of capital and technology but also by problems of access to markets, including tariff and non-tariff barriers which increased with the stage of processing.

11. In horizontal diversification within the commodity sector, the danger existed of creating new over-supplies and therefore of reproducing the problems associated with many commodity markets.

12. Diversification in agriculture was constrained by the quality of the soil and by environmental considerations. On fragile lands, co-operation was needed among the users for land and water management purposes.

13. In some cases it was difficult for economic, social and political reasons to find alternatives to traditional crops, and strengthened efforts to increase competitiveness and productivity, to improve quality and to undertake market promotion activities were hence required.

14. There was a link between development and political security, and in many countries political problems, internal conflicts and flows of refugees were disrupting production and economic development.

15. The need to take into account the influence of market forces and to devise policies, at both the national and international levels, to respond to these forces was recognized.

16. The implications of increased commodity imports by developing countries required examination. While a large proportion of the growth in such imports was accounted for by food items, there had also been a considerable increase in imports of agricultural raw materials and minerals for the industrial sector.

17. There seemed to be a difference in the approach of the North and the South to regional co-operation. In the North, the emergence of regional trade groups could create market access problems for those outside and especially for processed commodities. In the South, regional co-operation seemed to be more outward looking, focusing on joint efforts to export and to process commodities.

Chapter II

WHAT WILL BE THE EFFECTS ON COMMODITIES OF INCREASED CONSCIOUSNESS OF ENVIRONMENTAL AND HEALTH CONSIDERATIONS?

18. Paulo Nogueira-Batista, Ambassador, Visiting Professor at the University of São Paulo, and Senior Advisor to the Governor of São Paulo, Brazil, in presenting his paper contained in annex V, stated that in attempting to answer the questions addressed in the agenda item, a host of other questions emerged for attention by the international community.

19. Environmental concerns were a global issue which called for burden sharing, not burden shifting. There was a need to share experiences and to learn from past mistakes and involve all partners, namely government, private sector, NGOs and international institutions, in finding balanced solutions in a non-confrontational manner.

20. Such solutions would vary as between countries, depending on their level of development. Developing countries would need to have access to transfers of technology and finance to help them cope. Given the need to feed their populations, many developing countries would have no alternative other than to make environmental considerations a secondary priority unless such help was provided.

21. In the environmental area there was often a need for public intervention, stretching from community co-operation to national or international regulation. While the private sector could provide much assistance even at the global level, the issue could not be left to market forces alone. There had been several private initiatives to set principles of behaviour and provide for sharing of technologies, and these should be supported. However, because of the presence of vested interests, assistance to developing countries was seen as best given through multilateral institutions.

22. Environmental or health concerns had been used to justify protectionist barriers for industry in developed countries. Conversely, trade barriers had been used as a sanction to impose environmental measures. More information was needed on which trade barriers were environment-related, which commodities were affected and their influence on production and processing. Sanctions might have little effect if trade was small in relation to output or if technologies were not available. In this connection, special and differential treatment for developing countries might lead to goods not meeting international standards, being refused entry or being unacceptable in foreign consumer markets.

23. It was claimed that environmental sanctions were sometimes imposed or threatened from the North, to solve problems such as global warming caused by the North over the last century, as a means to induce actions in the South which in fact would impede their development. Rather, these problems should be approached from the point of view of sustainable management of resources, and concerns for the environment should not be seen as forcing developing countries to remain underdeveloped.

24. In some cases environmental concerns were linked with issues relating to the human rights of indigenous peoples, but solutions were proposed focusing on one angie alone.

25. It was necessary to distinguish more clearly between environment and health concerns, especially when the latter related to the production of dangerous products for which solutions and alternative crops were difficult to find in many producing countries.

26. Optimism was expressed about using health and environment considerations as a means of promoting commodities which were environmentally friendly, developing new uses for them, and obtaining finance for such initiatives.

27. Many of the world's poor lived on fragile marginal land where environment problems centring on the man/land/water equilibrium and energy were considerable. Rural/urban population movement was not a viable solution to this problem, as migrants often caused increased environment and health problems around urban centres. Efforts were needed to replicate successful land management schemes to help these poor and the environment, and these schemes required investment over time, community co-operation, and access to efficient technology and markets. Efforts were needed to increase

agricultural productivity on fertile, less fragile land and to reduce the intensity of cultivation on marginal lands. This implied use of high, "green revolution" technology and increased education of farmers.

28. Intertemporal problems relating to the environment were important; costs of reclamation or waste disposal were often left to the next generation. Recycling did not necessarily have negative effects for new production, but could co-exist, as was the case for several metals already.

29. Investment institutions were becoming an important influence in terms of enforcing environment standards in projects, particularly in reaction to public pressures on them.

30. Possibilities were seen for including environment and health concerns within the framework of commodity agreements. Such concerns were already covered in the objectives of two agreements (tropical timber and jute) where projects addressing them had been developed. There might be a need to rethink the design of international arrangements, as well as take account of the fact that agreements or arrangements did not cover a large number of commodities; other ways of treating these concerns through international agencies would be needed for such commodities.

Chapter III

CAN TECHNOLOGY PROVIDE A SOLUTION TO THE PROBLEMS OF THE COMMODITY SECTOR?

31. Alex Duncan, Programme Director of the Food Studies Group in the International Development Centre, University of Oxford, United Kingdom, introduced the paper prepared by himself and his colleague Shujie Yao (attached in annex VI).

32. In the discussion, it was recognized that mankind as a whole had benefited from technological progress, although the effects of such progress varied between countries and over time.

33. Many commodity producers considered technology as a threat insofar as it generally led to increased production and reduced intensity of use, which led to depressed prices. Since, however, technological progress should not be stopped, countries should adopt a positive attitude towards it, in particular with a view to reducing costs of production and remaining competitive. In several cases the adoption of new technologies by developing countries had allowed them to recover lost markets and market shares and to develop new exports.

34. It was pointed out that government policy with regard to technology and its impact should be seen in the light of the dynamics of shifts in demand and of changes in comparative advantage over time. Any country which was significantly dependent on the export of a given commodity and which was losing its

comparative advantage should not try to insulate its producers from declining world prices. It should instead foster, to the extent possible, the adoption of the necessary technologies required to reduce costs of production in order to remain competitive while taking advantage of all diversification opportunities.

35. On the other hand, concern was expressed regarding the introduction of capital-intensive, labour-saving technologies, often associated with foreign investment, and its social and cultural impact, in particular on income distribution and employment: it often resulted in the immediate laying-off of a large fraction of the labour force involved, who had no alternative employment opportunities. It was felt that the effects of technologies on income distribution depended on the relative prices of the various factors of production and that Governments could play a significant role in this regard by influencing relative factor prices, e.g. by minimizing subsidies which reduced the cost of capital relative to labour.

36. There was also a need for a more open discussion of the rehabilitation of productive operations and acceptance of the necessity to agree on appropriate guidelines in this regard. More attention should be devoted to industrial restructuring in developing countries, particularly in agro-industries and in industries which supported agricultural production. In this process, the adoption of energy-saving, cost-reducing and environmentally friendly modern technologies was particularly called for.

37. Developing countries should adopt the necessary policies to reinforce their research and development capacities in order to participate fully in the biotechnological revolution.

38. South-South co-operation had a special role to play in the field of technology, in particular in the sharing of know-how developed in adapting technologies for local use. Among factors determining adaptive capacity, the need to improve the educational systems and to retain technical personnel in developing countries was underlined.

39. The international community should provide special assistance to those low-income developing countries which were highly dependent on commodity exports in order to allow them to adopt modern technologies, remain competitive, and thus avoid further marginalization.

40. Farmers in developing countries were generally not in a position to react spontaneously to price signals and changing production technologies and market conditions. Government support through effective extension schemes was often a key factor in many success cases.

41. It was agreed that there was a clear need for developing countries to develop skills for the procurement of modern equipment and technology on reasonable terms. Many developing countries,

through tied aid or because of lack of the necessary skills, were paying excessive prices in this regard, which resulted in a further erosion rather than an improvement of their competitive position. In this context, the achievement of equity in the distribution of benefits between the supplier and the receiver of technology was essential.

Chapter IV

HOW CAN AN ENABLING ENVIRONMENT BE CREATED TO STIMULATE THE CONTRIBUTION OF THE COMMODITY SECTOR TO DEVELOPMENT?

42. Paian Nainggolan, Director General of the Agency for Trade Research and Development of the Indonesian Ministry of Trade, in introducing his paper, stated that efforts to increase prices for primary commodities were not likely to succeed, given the prevailing excess supply situation for practically all commodities, and hence reliance had to be placed on processing by relocating industries in developing countries and fully exploiting opportunities for increased participation in marketing. His paper is contained in annex VII.

43. It was recognized that the external and internal enabling environments could not be separated, the former often exerting a larger influence than the latter on the prospects for utilizing the commodity sector for development. The external environment consisted not only of market opportunities and availability of information on these opportunities but also of government interventions in the forms of tariff and non-tariff barriers, including the escalation of these barriers with the stage of processing, the application of anti-dumping and countervailing duties, subsidies for production and export in respect of competing products, oligopolistic markets and restrictive business practices, the reinforcement of intellectual property rights, including patents and restrictions on the sale of technology, restrictions on the use of technology and rules governing flows of investment. The internal environment included the macro-economic framework, the provision of infrastructure, research and development, education and finance, distribution, marketing and transport services, labour and management skills, information flows to aid investment decisions and the foreign investment climate (regulations and procedures).

44. While the outcome of the Uruguay Round was uncertain, concern was expressed that it was unlikely to improve substantially market access conditions for, or the ability to attract investment to, the commodity sector. The emergence of powerful trading groups could also be disadvantageous for many developing countries. It was pointed out that there was often a contradiction between the policies and measures being prescribed for developing countries and those actually practised in developed countries.

45. One important way the commodity sector could contribute to development was through processing. The smaller the import content in processing the higher the value added and the probability of

higher retained earnings. Increased processing implied the relocation of industries and the acceptance by TNCs of this, given their control of processing capacities worldwide. Since foreign investment was often difficult to obtain for processing, new forms of assistance from international or regional financial institutions to stimulate these activities were required.

46. Information on markets and price formation mechanisms for most commodities was mostly located in developed countries, which placed producers at a disadvantage. There was a need for the establishment of information systems which would allow producing countries to anticipate future market trends. These systems were likely to be more efficient than market intervention mechanisms. They might involve both using commodity-specific producer/consumer fora for discussions on market prospects and investment trends and exchanges of information on a commodity basis between producing countries. Better representation of producing countries and transparency in the functioning of commodity markets would encourage increased use of market instruments, including risk management tools, in order to reduce price instability.

47. The higher the stage of processing, the greater was the need to understand the industry and market structures and to employ modern marketing and distribution systems.

48. At the domestic level, several policies and related measures could help to create an environment for enhancing the contribution of commodities to development. These might include establishing domestic income stabilization mechanisms, creating incentives for stimulating labour-intensive activities to produce intermediate inputs and other linkages within the country, promoting local processing, including through the use of restrictions, taxes or tariffs and, when appropriate, through regional co-operation, and promoting the development of related service and industrial activities through tax, tariff and exchange rate policies. One approach suggested was to identify priority sectors and then use trade policy and other strategic interventions to induce the structural changes desired. These policies could include incentives to induce the private sector to provide support services such as credit and marketing mechanisms.

49. Foreign investment inflows could supplement domestic investment and facilitate the adoption of modern technology and the establishment of environmentally sound production and processing activities. Care should be taken when attempts were made to pass on second-hand equipment or old technologies.

50. Developing countries needed to strengthen their technical, research and financial expertise to enhance the benefits from foreign investment in commodity production and processing. Neglect of these aspects had adversely affected their bargaining power with TNCs and the selection of appropriate technology. It was noted that assistance in these areas from international organizations was too dispersed and its effectiveness could be significantly increased through co-ordination. Developing countries would also

benefit greatly from an improved exchange of information with other producers.

51. It was pointed out that while the provision of infrastructure, research and development and education were crucial parts of a domestic enabling environment, they were precisely the areas where expenditures were being cut in countries undertaking structural adjustment programmes. Most developing countries lacked the financial resources to carry on research and development, to test research results and to introduce them into production processes.

52. It was recognized that countries needed to present information on their policies and plans clearly and openly in order to obtain the confidence of donors, banks and investors.

53. A growing form of bilateral co-operation in commodity production and processing involved buy-back arrangements where investment and technology were paid for through the supply of part of the output at world market prices. This provided a method of assuring stable supplies and stable export outlets, and of ensuring solvency of investment credits.

54. The meagre amounts of trade finance available were an important constraint on diversification efforts and in particular on South/South trade, and hence special efforts were required to increase the amounts of such finance.

55. Import substitution policies could be in contradiction with export-oriented diversification programmes. However, social and other problems reduced the ability of Governments to take away the protection afforded to import-substituting industries.

Chapter V

HOW CAN THE BALANCE BETWEEN WORLD SUPPLY AND DEMAND FOR COMMODITIES BE IMPROVED?

56. Kobena Gyapea Erbynn, Chief Executive of the Ghana Investments Centre, in presenting his paper on this item (attached as annex VIII) underlined the need for a better understanding among commodity producers and consumers of each other's concerns and objectives in order to have a productive outcome in the forthcoming discussions and negotiations relating to commodity agreements/arrangements.

57. In the discussion, it was recognized that a major structural change had taken place in commodity markets in the past 20 years which had affected both supply and demand. On the supply side, commodities had accounted for half of developing countries' export earnings at the end of the 1980s (excluding those by the major petroleum and manufacturing exporters), compared with four-fifths in 1970. On the demand side, developing countries had become significant importers of commodities. A continuation of these trends would result in developing countries becoming net importers

of commodities in the coming decades. In the view of some participants, this might affect the commonality of interests of the developing countries as exporters of specific commodities.

58. There was a need for a more realistic approach to international commodity policy. It was stressed that the interplay of free-market forces was not by itself sufficient to ensure market stability and avoid waste of scarce resources in the production and marketing of commodities for two major reasons. Firstly, world commodity markets were subject to interventions such as subsidies, tariff escalation, non-tariff barriers, disposals from government-held stockpiles and restrictive business practices. Secondly, these markets often provided misleading price signals which tended to aggravate supply/demand imbalances, particularly given the lead/lag times between investment and production and lack of mobility of factors of production.

59. The growing interdependence between developed and developing countries was underlined, and producer/consumer co-operation was called for in order to promote a better balance between supply and demand of specific commodities. In this context, producers' co-operation was seen as a prerequisite for more fruitful producer/consumer co-operation and should not be perceived as a threat to consumer interests.

60. The co-ordinating role of UNCTAD in the field of commodities was particularly highlighted and it was felt that it should be fully implemented.

61. A range of instruments existed for promoting a better balance between supply and demand. There was need for a fresh and thorough examination of the role that ICAs could play in this regard. In this examination attention should be given to the possibility of incorporating new objectives, such as those relating to environment, while taking into account new market realities and the need to be more responsive to the market. Account should also be taken of the role of an ICA as a forum for exchange of information, analysis and debate on the market situation of a commodity. In this regard, it was noted that provisions for semi-automatic adjustment of the agreed price ranges could be incorporated in ICAs with economic clauses. The full participation of all major producers and consumers was essential for the effective operation of these ICAs. It was felt that ICAs should not be considered as a means of transferring resources (through price-raising) and that the focus should be on security of supplies and predictability of prices.

62. ICAs without economic clauses but incorporating developmental measures (such as research and development, market promotion, promotion of processing and exchange of information) could also contribute to a better balance between supply and demand while addressing new concerns.

63. The objective of balancing supply and demand could also be achieved through more flexible arrangements which improved market transparency, such as study groups which allowed for frequent and regular consultations between producers and consumers, for collective assessment of the market situation and outlook and exchange of information and experiences. In addition, the designation of these study groups as eligible ICBs by the Common Fund would allow for access to the financing facilities available through its Second Account. The role that the Common Fund could play in promoting international co-operation in the field of commodities, especially through its financing of commodity development programmes and projects, was underlined.

64. Promotion of South-South trade in the field of commodities assumed particular relevance in view of the growing significance of developing countries as commodity importers. Practical measures for the promotion of such trade included the development of the necessary infrastructure (transport and financing facilities).

65. There was a need for programme-based support which transcended any individual commodity and took full account of substitution and complementarities between commodities. This was an area where UNCTAD could make an important contribution.

66. It was generally agreed that in the preparations for UNCTAD VIII, Governments should consider the need for the evolution of an international commodity policy which would provide the framework for strengthened producer/consumer co-operation on individual commodities, taking into account the specific characteristics of each commodity.

Annex I

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Annex II

OPENING STATEMENT BY THE SECRETARY-GENERAL OF UNCTAD

Your Excellencies, Ladies and Gentlemen,

I should like to welcome you to this Round Table on International Commodity Policies aboard the cruiser the "*Serguei Esenin*", as well as to thank you for having accepted our invitation to participate in this event in your personal capacity. We greatly appreciate the sacrifice you have made in finding the time in your very charged schedules to attend this Round Table. It is clearly an indication of the seriousness which we all attach to the issue of commodity policy and of the need for an open and frank discussion about it by the international community.

1. Acknowledgments

Before going into the substance of the issues, I should like to express our deep appreciation to the Government of the Soviet Union and in particular to the Ministry for External Economic Relations for sponsoring this Round Table as their contribution to the preparations for the eighth session of UNCTAD, to be held in *Cartagena de Indias, Colombia* from 8 to 25 February 1992. I should also like to thank Mr. Vakhtang V. Makharadze, General Director of Interferma, for the logistical support his joint venture is providing for this Round Table. I might mention that Mr. Makharadze's enterprise was the first joint venture by the Soviet Union with Western Europe. The company is actively engaged in commodity production and processing in the USSR, including in the sale of rye bread to the United States. I should also like to express my thanks to Mr. Hartantyo, Managing Director of the Common Fund for Commodities, and the representatives of the commodity organizations who have joined us for this meeting.

2. Commodity situation

All of your countries are exporters, importers, producers and consumers of commodities. No country is self-sufficient in the whole range of commodities, and hence the issue of commodities is a good illustration of the interdependence of countries. For example, most petroleum-exporting countries depend on food imports, while in contrast most food-exporting countries depend on petroleum imports.

The dominant feature of the eighties has been the prevalence of very depressed real commodity prices by historical standards. This has had adverse effects on all commodity producers. For the commodity-dependent developing countries, the impact of the fall in commodity prices has been extremely severe and is comparable to that of the increase in their debt service burden. Indeed additional resources for their development are heavily dependent on a substantial improvement of their commodity export earnings. Surprisingly, while the debt problem has been extensively discussed and solutions sought, comparable attention has not been paid by the international community to the basic problem, namely of depressed commodity prices.

The commodity crisis encompasses virtually all commodities. Policies involving subsidization of production as well as exports, in particular in developed countries, expansion of the range of commodities produced in the more advanced among the developing countries, productivity improvements, and in certain cases a contraction in import demand as a result of increased domestic production of similar or competing products have led to sustained pressure for supply to exceed demand even when commodity prices continue to fall.

The solution of the commodity crisis requires sound policies in both developed and developing countries. But the success of such policies is crucially dependent on their compatibility and consistency, which we believe, can only be achieved within the context of an international commodity policy. This is the challenge for the nineties. Growing awareness of the increasing complexities of the international commodity economy and of new dimensions to the commodity problematique might well provide a positive stimulus to the achievement of this goal.

Complexities exist on both the demand and supply sides. The demand for raw materials is affected by the long-run tendency towards a relative decrease in the consumption of commodities per unit of output in industrialized countries, as well as changes in tastes and in age structures of populations. With respect to the supply of commodities, the tendency to increase production irrespective of the market situation is influenced by specific government policies for individual commodities, by technological innovations, by the inability of traditional suppliers to cut back production upon the entry of new entrants with lower costs and by macro-economic policies adopted, notably by highly indebted country Governments attempting to increase export revenues in the face of debt-service pressures. Another complexity concerns the actors in the international commodity economy. There is a growing concentration of purchasing power in a diminishing number of enterprises - including transnational corporations - as a result of take-overs and mergers. This has led to increasingly oligopsonistic markets in a situation where there are an increasing number of suppliers. In addition, commodity futures and options markets are seen more and more as part of an international financial network that encompasses stock, bond and currency markets, with investment and speculative funds moving across them.

The new dimensions to the commodities problematique, on the other hand, offer opportunities, if they can be realized, for an improved commodity situation. They encompass, *inter alia*, potential demand for commodities in developing countries and within the enlarging trading groupings, especially Europe in the context of the economic and social changes taking place in Central and Eastern Europe. A further new dimension relates to environmental considerations. Commodities are the key element in virtually all environmental questions. The production, exploitation and processing of commodities, whether of agricultural or mineral origin, have effects on the environment, though not necessarily harmful ones. New opportunities for commodities should emerge from emphasis being placed on ecologically friendly natural products. Governments and the public in the North and in the South recognize the need to place increasing emphasis on environmental factors in order to ensure the sustainability of development. In the North, the challenge is to restore the environment while adapting life styles and productive activities. On the other hand, in the South, the challenge is to eradicate poverty, produce more food, increase employment and exports while preserving and protecting the environment and the ecological balance. All these elements need to be taken into account in international commodity policy formulation.

3. The need for an international commodity policy

The international community should, in exploring the implications of these complexities and new dimensions, use the opportunity of UNCTAD VIII to set in motion the evolution of an international commodity policy which will provide lasting solutions to commodity problems and improve the development prospects of third world countries.

The central objectives for an international commodity policy have broadly been established by the international community. These include achieving stable conditions in international commodity trade at price levels that are remunerative to producers and equitable to consumers; promoting equilibrium between supply and demand; improving productivity and increasing export earnings, in particular of developing countries; maximizing overall efficiency and sustainability of development in the use of resources; halting and reversing protectionism and removing distortions to trade; and enhancing the ability of developing countries to manage commodity dependence, notably through diversification. Most of these objectives are reflected in Conference resolution 93(IV) on the Integrated Programme for Commodities, which was reconfirmed at UNCTAD VII, and in the general principles governing the Uruguay Round of Multilateral Trade Negotiations. Yet the translation of these central objectives into implementable measures and action has been sporadic, and no clear international commodity policy has evolved.

Moreover, the measures and actions taken at the national level by important actors in the commodity area, which in a sense have filled this vacuum, are, in many cases, inconsistent with these objectives.

The immediate priorities which it seems Governments will need to address in the context of the evolution of an international commodity policy are:-

A. *Balancing supply and demand of individual commodities at improved real price levels;*

B. *Optimizing the contribution of the commodity sector to development; and*

C. *Ensuring sound management of natural resources in sustainable development utilizing fully the potential of the commodity sector.*

These priorities call for strengthened co-operation between producers and consumers, between producers themselves and among international institutions to provide the necessary support.

4. *The purpose of the Round Rable meeting*

The purpose of this Round Table is to stimulate new ideas on how to maximize the contribution of the commodity sector to growth and development, taking into account the major changes which we are currently experiencing and which we will continue to experience during the nineties.

In this regard we have highlighted five issues which we feel should be addressed. These are:

A. *Is continued reliance on commodities as an engine of growth a viable option?*

B. *What will be the effects on commodities of increased consciousness of environmental and health considerations?*

C. *Can technology provide a solution to the problems of the commodity sector?*

D. *How can an enabling environment be created to stimulate the contribution of the commodity sector to development? and*

E. *How can the balance between world supply and demand for commodities be improved?*

Moreover, in respect of each of these issues, we have before us papers from five of the prominent experts present. Intentionally, we asked these experts to make their papers provocative and not to provide an extensive exposé on the issues in question. I am sure that in their presentation of these papers they will be very direct in posing questions that we need to address.

Solutions in the commodity area have proven to be difficult to find and realize. Domestic policies alone, irrespective of however sound they be, cannot fully provide them. Solutions require above all the support of consistent policies among countries. Such consistency may come through greater reliance on market forces than in the past, but this does not obviate the need for an international commodity policy complemented by specific national policies. In fact, international and national commodity policies may well need to envisage an increased role for Governments in certain areas, notably with regard to environment questions and food security.

The current absence of a clear international commodity policy impairs the ability of international institutions to respond in a coherent fashion to the commodity crisis and in particular to the problems faced by commodity-dependent countries, especially the developing ones. In some instances, the assistance and advice being given may well be aggravating rather than resolving commodity problems and the crisis itself. UNCTAD VIII provides a timely occasion for Governments to address the commodity issue seriously. May this meeting provide a stimulus both to Governments and the secretariat in the preparations for the Conference.

Annex III

THE USSR IN THE WORLD COMMODITIES MARKET: PROBLEMS AND PROSPECTS

Presentation by Igor KAZAKOV, Director, Raw Materials Department
Market Research Institute, USSR Ministry of External Economic Relations

The scientific and technical progress of civilization at the end of the century is making greater demands on primary and intermediate goods. In the commodity structure of these supplies, non-renewable minerals and fossil fuels predetermine the process of growth in the world economy. Harmonious global economic development is likewise impossible without adequate supplies of the "simple" products of agriculture and forestry which are reproduced each year, especially food for the 5 billion people who now inhabit our planet Earth. In the system of general human values, the global commodities economy, as the common heritage of the world community of sovereign States, in fact serves the basic function of providing for growth.

The mineral-commodities sector of the world economy is, moreover, fundamentally part of the international division of labour, with large-scale export-import flows now delivering raw materials and fuels as well as a variety of semi-manufactures and finished goods for industrial and household use. Improvements are taking place in the operation of the world market for fuels and raw materials, which is highly diversified in its range of goods and extremely large in physical and value terms. Foreign trade in fuels and raw materials is also of great importance in resolving global structural problems such as energy, food, raw materials and the environment, and in overcoming the backwardness of the developing countries and of some former or existing socialist countries. And this makes the international division of labour in the world commodities sector a key objective of international relations between sovereign owners of natural resources and the many legal entities concerned with the multiple aspects of trade and final consumption of goods in the process of capital reproduction.

There is consequently an imperative need for the world economy to make optimum use of the fossil fuels, minerals and renewable agricultural and forestry resources available to modern civilization so as to provide for the growing population and ensure that its demand for food, energy and intermediate goods can be supplied while at the same time preventing environmental degradation of the planet. Indeed the essence of the commodities problem today is the evolving dialectical contradiction between society's growing global requirements for fuel and raw materials and the possibilities of satisfying them in an economically effective way under the socio-economic conditions which affect their production and consumption.

As one of the largest in the world, the Soviet Union's mineral-commodities sector has an appreciable influence on the world markets for fuels and raw materials, on their international value and world prices, and on the profits of commodity exporters and importers. Indeed, it is precisely in the world commodities economy that the Soviet Union for now has its niche - its economic interaction with the rest of the world being characterized by a substantial volume of exports of primary products, but also by the need to utilize industrial cooperation and foreign capital to "enhance" its mineral resources by further processing them to make high-quality goods which are competitive both as import substitutes and on the world market. The Soviet Union's export potential is still directly dependent on its natural wealth: its explored and hypothetical mineral reserves are estimated to be worth 119 trillion roubles (in 1990 wholesale prices), and this includes 19.1 trillion roubles of proven reserves of fuels and minerals "ready" to become goods on the domestic and international markets.

Not surprisingly, therefore, the available data show that in the late 1980s (before it was gripped by a general crisis in 1990 onwards) the Soviet Union was the world's top producer of oil and natural gas, iron and manganese ores, steel, potassium salts, ammonia, commercial timber and sawnwood. Moreover, it ranked second for its output of gem diamonds, phosphates and raw materials for the production of lead, zinc, nickel and chromium, as well as for its output of gold, aluminium, sulphur, petroleum products, liquefied natural gas and cement. It also ranked third for the production of coal and table salt and fourth for copper ore, silver and natural diamonds. This determines the country's "natural" export potentialities, which are being "spurred" by its faster growing import requirements - although, unfortunately, these are frequently not economically optimal (as is the case, for example, with its massive imports of grain, meat, animal oils, medicines, soap and various other consumer goods).

For some items the USSR's export-import share in world trade in commodities has become significant over the past few years. It is estimated, for example, that Soviet timber, oil, gas, coal and copper constituted up to 10 per cent of world exports; gold, diamonds and aluminium accounted for 20-25 per cent and platinum for 10-20 per cent, while nickel and palladium represented 30-40 per cent and ammonia and urea as much as 40-50 per cent. In world imports, too, the Soviet Union's share is sizeable in the case of grain and various other food goods, rolled metal products (cold-rolled sheet, tin-plate, large-diameter pipes for oil and gas pipelines, special steels and alloys), chemicals (plastics and superphosphoric acid), medicines, bauxite and aluminium oxide.

The Soviet Union's large exports of a relatively narrow range of fuels and raw materials has, however, proven to be its Achilles heel, making it extremely vulnerable to the fluctuations on the world markets for these commodities which characterized the 1970s and 1980s. In 1986-1990, for example, the Soviet Union's theoretical losses due to falling prices on the world oil market alone are estimated at $40 billion. Moreover, the commodity dependence of Soviet exports became a persistent structural problem, reflecting the "costs" of the command-style, militarized system of economic management which operated on a substantial scale employing an extensive model of development unresponsive to scientific and technical progress under the conditions of confrontational and ideological dogmatism and economic autarky in the period up to 1985. The result was an inefficient economic mechanism that for years perpetuated an extremely imperfect commodity structure of exports, adding to the environmental crisis in the exploitation of the USSR's natural resources.

In the total value of Soviet exports in 1989 (68.3 billion roubles) the share of fuels, minerals, metals and chemicals was 52 per cent, while that of renewable commodities and products derived from processing them came to 6 per cent, with machinery and equipment accounting for 16 per cent in all. Meanwhile the share of the latter in imports was 38.5 per cent, as against 16.6 per cent for foods and beverages and raw materials for their production, 14.4 per cent for manufactured consumer goods and 1.6 per cent for textile raw materials and semi-manufactures. The crisis of 1990 reduced Soviet exports to 60.8 billion roubles, with the export share of fuels and electric power rising to 40.5 per cent (39.9 per cent in 1989), that of ores, concentrates, metals and metal products to 11.3 per cent (10.5 per cent), that of chemical products, fertilizers and rubber to 4.6 per cent (4 per cent), that of wood products, pulp and paper goods to 3.7 per cent (3.5 per cent) and that of foods and beverages and raw materials for their production to 2 per cent (1.6 per cent). On the other hand, the share of textile raw materials and semi-manufactures declined to 1.2 per cent (1.6 per cent). At the same time, exports of some major items increased - in the case of roundwood to almost 21 million m^3 (worth 702 million roubles) and in the case of nitrogen and potash fertilizers to 7.2 and 5.5 million tonnes respectively, although earnings over the past few years have declined to 485 and 296 million roubles respectively. Likewise, earnings from exports of urea (5.1 million tonnes) fell to 372 million roubles.

The problem lies not only and not so much in the high volume of exports of fuels and raw materials from the USSR, since other countries - the United States, Canada, Australia and South Africa - similarly export commodities. Rather, it lies in the fact that there is virtually no growth in exports of machinery and equipment, whose low competitiveness does not even meet the increasing technological requirements of the domestic market. The rapidly expanding domestic market for engineering goods is a long way from being satisfied by national output. Despite the emphasis on quality in the five-year plans and the enormous programmes of investment in the Soviet Union's engineering sector, the development of the country is virtually impossible without massive imports of technology and machinery.

The greater necessity, partly connected with this, of servicing the country's large external debt led to a contraction of Soviet imports in 1990 to 70.7 billion roubles with the share of machinery, equipment and vehicles in the structure of imports rising to 44.8 per cent and that of manufactured consumer goods to 17.7 per cent. Meanwhile, the share of foods and beverages and of raw materials for their production declined in value terms to 15.8 per cent, that of ores and concentrates, metals and metal products to 5.1 per cent, that of chemicals to 4.1 per cent, that of wood and paper goods to 4.5 per cent and that of textile raw materials and semi-manufactures to 1.1 per cent. However, although imports of textile fibres declined from 104 to 102 thousand tonnes, their value increased to 105.6 million roubles, while imports of jute, for example, almost tripled (to 33.1 thousand tonnes or 10.4 million roubles) and tea imports increased to 255.5 thousand tonnes. Purchases of natural rubber also rose, to almost 153 thousand tonnes, as did purchases of medicines (2.3 billion roubles).

Nevertheless, the growing foreign currency shortage led to a contraction of imports of a whole range of commodities, including extremely important ones such as maize and sugar, coffee (down from 113 to 58.4 thousand tonnes) and cocoa beans (down from 179 to 104 thousand tonnes).

The problem is also partly that the favourable situation for exporters on the world market for petroleum products in the second half of 1990 was not exploited by the Soviet Union, whose deep political and economic crisis led notably to a drop in the production of oil (and gas condensate) to 570 million tonnes, with exports (including re-exports) of oil decreasing to 108.6 million tonnes for a total of 10.7 billion roubles. Exports of petroleum products fell to 50 million tonnes and were worth 5.1 billion roubles. Owing to strikes, hard coal deliveries to the rest of the world also decreased - to 35.4 million tonnes (1.1 billion roubles) - as did supplies of electric power - to 36.3 billion kWh (1.04 billion roubles). Moreover, the Soviet Union was unable to offset the shortfall in these foreign exchange earnings by further increasing exports of natural gas to 109 billion m^3 or almost 6.5 billion roubles.

Characteristically, the process of disintegration of the CMEA and the cut in Iraq's oil supplies to the USSR during the war led to some exports of oil and petroleum products being redirected to markets in the developed countries, where 53.3 million tonnes of oil (5.3 billion roubles) and 36.5 million tonnes of petroleum products (3.3 billion roubles) were sold, as against 40.2 million tonnes (4 billion roubles) and 7.3 million tonnes (1.1 billion roubles) respectively in the CMEA countries. The latter were also supplied with 46.1 billion m^3 of natural gas (3.35 billion roubles), whereas 59.6 billion m^3 (worth about 3 billion roubles) went to the developed market-economy countries. Some 0.7 million tonnes of oil, 3.3 million tonnes of petroleum products and 1.7 million tonnes of hard coal were exported under barter agreements. For 1990 as a whole, the shortfall in exports of oil and petroleum products amounted to 44 million tonnes. Early in the year the Government decided that 5 per cent of the foreign currency earnings from Soviet exports of up to 98 million tonnes of oil should be deducted from producer enterprises but the rate of deduction went up to 10 per cent for the next 19 million tonnes and then to 20 per cent for a further 8 million tonnes. However, the increasingly acute shortage of petroleum products in the country meant that the USSR had to import more than 1 million tonnes of petrol.

The situation as regards oil and gas exports in 1991 is also difficult to predict. State orders have been placed to export 61 million tonnes of oil, with the rate of foreign currency deductions set at 60 per cent, while for additional exports of 12.5 million tonnes the rate will rise to 70 per cent of all earnings on that amount. For petroleum products the rate has been set at 35 per cent, but these exports are expected to decrease to around 30-35 million tonnes (at most 19 million tonnes for furnace fuel oil, 17 million tonnes for diesel fuel and 1.7 million tonnes for petrol).

An analysis of the USSR's export capacity shows that a sizeable share of the actual output of fuels and raw materials was supplied to the rest of the world in 1990 as follows (in percentages, with figures for 1989 in brackets): oil - 17.7 (21), diesel fuel - 17.2 (18.6), fuel oil - 12.1 (13.8), natural gas - 14.5 (12.7), iron ore - 10.5 (12.2), chromium ore - 15.9 (19.7), rolled ferrous metals - 6.4 (7.2), potash fertilizers - 27.5 (28.8), nitrogen fertilizers - 17.1 (19), commercial timber - 7 (6.5), sawnwood - 7 (7.9) and veneer - 10.9 (13.7).

Imports in 1990 met the requirements for food and non-food products as follows (percentages of total consumption in physical terms, with figures for 1989 in brackets): grain (other than hulled) - 13.2 (15.5), of which maize - 46.6 (40.4); tea - 41.1 (35), of which 29.2 (26.9) from developing countries; medicines - 30.1 (28.2), of which 3.2 (2.8) from developing countries; soap - 25.8 (18.5), of which 16.7 (11.1) from developing countries; raw tobacco - 12.6 (13.3), of which 6.1 (3.9) from developing countries; vegetable oils - 14 (25.6), of which 11.9 (21.7) from developing countries; animal oils - 14.3 (12.6); meat - 8.6 (5.1); pesticides and insecticides - 23.1 (26.7); soda ash - 13.3 (10.4); caustic soda - 6.6 (7); steel pipes - 8.3 (14.7), of which for oil pipelines - 10.6 (17.8), with 2.5 (3) coming from developing countries; and rolled ferrous metals - 2.6 (3.6), of which 0.1 (0.1) from developing countries.

The commodity import requirements - including vitally important food supply needs - of the Soviet economy and its republican and regional sectors, which have been growing rapidly during the crisis, are certainly a long way from being fully offset by earnings from traditional fuel and raw material exports - notwithstanding the remarkable expansion in exports of aluminium, copper, nickel, other ferrous, rare and precious metals, diamonds, unprocessed uranium - containing minerals and isotopic products. The conversion of the defence industries is gradually supplementing the commodity range of Soviet exports with "surplus" resources and with modern engineering materials, including composites.

Nevertheless, the commodity structure of Soviet exports of primary energy, metals, chemicals and forest products is still relatively unadvanced, owing to the low level of processing of primary products and hence the small share of goods with a significant value-added component. Moreover, the quality of even the homogeneous raw materials exported is often below the standard for similar goods in world trade, and their consequent uncompetitiveness entails a substantial loss of foreign currency earnings.

It is only by utilizing the advantages of the international division of labour in the Soviet Union's mineral commodities sector and by importing foreign capital that a self-developing market process can be established, permitting a large-scale transformation of the upper technological echelons of the country's economy and providing it with broad access to the world market through competitive engineering goods and technology, science-intensive products and a range of services. This will also help to solve the fuels and raw materials problem in the development of foreign economic links. The strategic goal of their optimization relates first of all to the powerful potential of the economy's basic industries, progressively helping to overcome the commodity dependence of exports by steadily increasing the export share of products of the processing industries thanks to advanced and comprehensive processing of fuel and raw material resources. Another aspect of the Soviet Union's commodities problem can thereby be solved - namely the development of high-technology and competitive import substitution industries.

This does not mean, however, that the USSR's import requirements for a whole range of scarce commodities - for which adequate production is not assured by geological reserves (tin, bauxite, etc.) or climatic conditions (rubber, jute, coffee, cocoa, some vegetable oils) - will not, after economic stabilization, be supplied in increasing quantities, inter alia from the developing countries. Even in the crisis year of 1990, the value of Soviet imports of tropical foods, for example, totalled 859 million roubles. Tea accounts for 49 per cent of these imports, vegetable oils for 18 per cent, coffee for 17 per cent and cocoa and sugar for 8 per cent each. The largest supplier of tea and coffee to the USSR is India, its deliveries of 126,000 tonnes of tea and 49,000 tonnes of coffee constituting more than 50 per cent of all Soviet imports of these commodities. The main suppliers of raw sugar to the USSR in 1990 among the developing countries were Brazil and Thailand, whose respective shares were 50 per cent (124,000 tonnes) and 35 per cent (86,000 tonnes), although this represents only 3 per cent and 2 per cent of Soviet sugar imports. Côte d'Ivoire accounts for more than half of cocoa imports, followed by Ghana (25 per cent), Brazil (10 per cent) and Nigeria. The USSR imports tropical vegetable oils from Indonesia, Malaysia and the Philippines (in all, 32 per cent of Soviet imports). In addition, sunflower, soya bean and linseed oils were imported from Argentina and Brazil, representing 38 per cent of total vegetable oil imports. In 1990 the USSR also imported 126,000 m^3 of logs of valuable tree species, notably from the Congo, Cameroon and Côte d'Ivoire, as well as about 55,000 tonnes of cotton fibre (from the People's Republic of China, Egypt, Syria and Afghanistan) and more than 33,000 tonnes of jute (about 25,000 tonnes coming from Bangladesh).

As both an exporter of fuels and raw materials and a large importer of some of them, the USSR is keenly concerned to stabilize the development of the world markets for these goods so that market fluctuations do not seriously harm producers and exporters. This position also frequently coincides with a desire for stable foreign trade relations with the developing countries in the world commodities sector, particularly as the third world's $1.3 trillion external debt has become a heavy burden, forcing African and Latin American countries in the late 1980s, for example, to spend respectively one third and about one half of their export earnings - and virtually all their earnings from exports of non-fuel commodites - on servicing their foreign debt. According to UNIDO estimates, the participation of the developing countries in the processing of commodities (other than oil) produced in their territories is not increasing and amounts to only 30 per cent.

The problem of foreign currency "accumulation" in the commodities sector of the economy is inherent to a large number of developing countries and is also familiar to the USSR. The question is how to utilize the possibilities of the commodities sector of the national economy with maximum efficiency for structural adjustment and development, and what factors help to gain wider access to modern processing technologies, encourage their importation and introduction and diversify the economy, among other things with a view to increased self-reliance and import substitution.

However, to achieve these strategic objectives it is essential to promote a favourable world economic environment, including the proper functioning of world commodity markets and stable, predictable conditions for international trade in commodities. In that context, the positive developments taking place within UNCTAD in implementation of the Integrated Programme for Commodities, notably through the second account of the Common Fund, would be given further impetus.

The Soviet Union's policy of support to the developing countries continues to be an important factor in restructuring international economic relations on an equitable, democratic basis. This applies not only to negotiations in the international economic organizations. A considerable number of specific enterprises have been or will be built in the developing countries with technical assistance from the USSR. As of 1 January 1991, 3,643 out of a total of 5,124 technical assistance projects had been brought into operation, with 903 out of 1,516 being completed in the developing countries. This includes 90 facilities brought into operation to generate electric power, 61 for flour milling, 46 in mechanical engineering, 39 in the food industries, 21 in iron and steel, 17 in coal mining, 10 each in oil refining, non-ferrous metallurgy and light industry, 8 in petro chemicals, as well as 101 in agriculture, 116 in transport and 217 in public education, health and culture. Of the 121 facilities planned in Algeria, for example, 71 are now in operation, 27 of them in industry. The respective figures are 60 and 15 in Angola; 233, 124 and 30 in Afghanistan; 40, 29 and 11 in Guinea; 110, 97 and 38 in Egypt; 103, 62 and 44 in India; 96, 77 and 40 in Iraq; 122, 93 and 70 in Iran; 41, 27 and 6 in Cambodia; 22, 12 and 2 in the Congo; 38, 29 and 7 in Laos; 43, 8 and 1 in Mozambique; 10, 3 and 1 in Nigeria; 14, 10 and 4 in Pakistan; 82, 48 and 22 in Syria; 15, 12 and 10 in Turkey; 10, 9 and 5 in Ethiopia. Facilities built and brought into operation in the developing countries with technical assistance from the USSR produce 5 million tonnes of coal, 13 million tonnes of iron ore, 14 million tonnes of coke, 16 million tonnes of iron, 16 million tonnes of steel, 13 million tonnes of rolled ferrous metals, 23 million tonnes of refined oil and have the capacity to generate 11 million kW of electric power.

Thus, in repayment of debts on credit extended to a number of developing countries, the Soviet Union in part also imports fuels and raw materials. This trend may be further developed with the intensification of technical assistance and the transition to joint ventures in the commodity sectors of foreign States and with partner companies entering into foreign economic relations with the USSR and its Union republics.

A key strategic element in optimizing the Soviet Union's foreign trade in fuels and raw materials is price reform, which implies gradually eliminating the artificial "cheapness" of raw materials and fuels and bringing their share in trade and their domestic prices more closely into line with those of the world market. The economic benefits to be derived from this process will increase as it is combined with measures to solve the problem of rouble convertibility.

The fact that domestic fuel and raw materials prices in the USSR were low compared with world prices for decades distorted measures of the effectiveness of exports of these goods and encouraged the export mainly of unprocessed primary products. For example, exports of 32.2 million tonnes of iron ore in 1989 earned 399.6 million roubles in terms of export value; in domestic wholesale prices this amounted to 414.2 million roubles and, including overhead costs, gave a 96 per cent budget effectiveness of exports. Figures obtained in the same way for other exports were as follows (percentages): 870 for helium, 331 for oil, 174 for diesel fuel, 153 for boiler fuel, 245 for chromium ore, 86 for iron, 139 for ferrous metal scrap, 160 for rolled ferrous metals, 189 for nickel, 140 aluminium, 248 for palladium, 179 for platinum, 131 for potash fertilizers, 67 for nitrogen fertilizers, 59 for roundwood, 56 for sawnwood and 66 for cotton fibre.

For imported commodities, budget effectiveness is calculated in a similar way. Thus, imports of 1.6 million tonnes of aluminium oxide in 1989 cost 472.5 million roubles in terms of import value, whereas in domestic wholesale prices this represented 273 million roubles, giving a percentage budget effectiveness of 58 per cent. This may be compared with 340 per cent for tin, 732 per cent for jute, 1,265 per cent for sisal, 136 per cent for wheat, 707 per cent for coffee, 724 per cent for cocoa beans, 307 per cent for tea, 229 per cent for cloves and 289 per cent for sweet peppers.

Furthermore, whereas in 1990 one tonne of Soviet oil sold on average for 90 roubles on the world market as against a wholesale price of 30 roubles, thereby generating a "superprofit" to be picked up by the State budget, subsidies were allocated from that source on the other hand to import many types of commodities. Thus, one tonne of electric-welded tubes would be imported for 829 roubles, but the consumer obtained them for 260 roubles. In the case of engineering sheet steel, the corresponding figures were 907 and 378 roubles. Subsidies for the purchase of rolled metal products alone thus amounted to 1 billion roubles in 1990.

In addition, the official exchange rate of the rouble against foreign currencies ceased to reflect its real purchasing power and had to be revised to 1.8 roubles to one dollar, i.e. a three-fold devaluation. As of 1 January 1991 the wholesale prices of many commodities were increased by half or doubled. All the same, the inconvertibility and progressive devaluation of the rouble distorts the proportions of trade both on the country's internal market and, to a considerably larger extent, in export operations.

Average wholesale prices for the main non-ferrous metals in the USSR

Metals	USSR Ministry of Metallurgy		London Metal Exchange and "free market" in Western Europe			
	1990	1991	1990		1991 1/	
	rouble/t	rouble/t	dollar/t	rouble/t	dollar/t	rouble/t
Aluminium	827	1 461	1 640 2/	957	1 516 2/	2 536
Copper	1 157	1 798	2 670	1 561	2 449	4 097
Nickel	4 154	6 070	8 894 2/	5 199	8 578 2/	14 349
Zinc	820	1 499	1 520	889	1 207	2 019
Lead	905	1 499	811 2/	474	601 2/	1 005
Magnesium	1 150	1 867	3 594	2 156	3 594	6 012
Antimony	3 505	4 346	1 702	926	1 725	2 898
Mercury	24 100	31 280	6 111	3 587	4 384	7 334
Tin	21 319	50 306	6 200 2/	3 628	5 623 2/	9 406
Cobalt	21 162	35 454	21 935	12 719	35 197	58 878
Cadmium	10 000	11 000	7 366	4 350	6 325	10 580
Selenium	21 000	21 000	11 962	7 005	11 243	18 807
Bismuth	25 000	25 000	7 345	4 315	6 283	10 510
Indium	370 000	370 000	233 000	136 000	233 000	390 000

1/ Position as of February 1991.
2/ LME quotations.

Goods prices have begun to be formed on the basis of real foreign trade value and using the commercial rate for the rouble. This has created more favourable conditions for the suppliers of export goods, while imports have become more expensive. Exporters of commodities have started to earn excess profits which do not depend on the results of their economic activity. Thus, for example, the value of one tonne of oil on export was 315 roubles, as against a wholesale price of 70 roubles. The difference was 82 and 52 roubles for hardcoal, 97 and 51 roubles for commercial timber and 240 and 154 roubles for sawnwood. With the rates of tax on exports introduced in 1991 and determined as a percentage of the foreign trade value of the goods converted into roubles at the commercial rate, not all but only some of the excess profits earned by enterprises from exports are leviable. The amounts remaining after payment of taxes increase their overall profits. The rates of tax on exports in 1991 for foreign trade operations were determined as follows: 40 per cent for oil, petrol and gas; 35 per cent for kerosene, fuel oil, jet and diesel fuel and lubricants; 30 per cent for ferrous and non-ferrous metal ores; 25 per cent for iron, iron castings and steel ingots; 20 per cent for rolled ferrous metals, tubes and metalware; 50 per cent for ferrous metal scrap or waste and ferrous metal products; 45 per cent for non-ferrous metals and alloys, concentrates, rolled ferrous metals and metal products, and non-ferrous metal scrap or waste; 30 per cent for hard coal coke and non-ore minerals; 5 per cent for hard coal, brown coal and ferroalloys; 30 per cent for construction materials; 35 per cent for sodium dichromate, nickel sulphate, inorganic oxides, protoxides and peroxides, acetone and xylene; 25 per cent for benzene, styrene, spinning-mill feedstock and carbon bisulphide; 15 per cent for organic and inorganic salts, rubber and industrial carbon; 10 per cent for potash fertilizers; 10 per cent for roundwood; 15 per cent for sawnwood; and 25 per cent for veneer, paper, carton and pulp.

A tax was also introduced on imports. This was set at only 20 per cent for dried milk and 30 per cent for tulle, but 500 per cent for packaged tea and 1,000 per cent for American cigarettes.

Another instrument of State foreign trade regulation was the Presidential Decree introducing a "special procedure for the use of foreign currency resources in 1991". This requires all enterprises except joint ventures to sell 40 per cent of their foreign currency earnings to the Bank for Foreign Economic Relations (Vneshekonombank) at the commercial rate for the rouble. The enterprise then credits part of the remaining foreign currency earnings to its own foreign currency funds at a standard rate, while the residual is transferred to the Union-republican foreign currency fund and to local budgets. The standard rate for crediting earnings to foreign currency funds varies from one commodity to another depending on the degree of processing of the raw material. For example, it was set at 35 per cent for petroleum products, 40 per cent for coal, 20 per cent for gas and electricity, 30 per cent for ferrous and non-ferrous metals and 25 per cent for chemicals.

Under pressure from republican leaders, at an extended meeting of the Cabinet of Ministers held on 15 May 1991 to discuss the Government's crisis management programme outlined by Prime Minister V.S. Pavlov, President M.S. Gorbachev declared: "I will endorse a decision to repeal the Decree tomorrow, but show me other means of servicing the external debt". At the same meeting it was agreed that quantitative regulation and licensing of exports should largely be transferred to the republics, except in the case of 18 to 20 commodities. A review of the Presidential Decree prohibiting barter operations in 1991 has also been proposed, mainly in response to sharp criticism of it by the RSFSR Prime Minister, I.S. Silayev. New wholesale prices for commodities, along with customs and currency regulation of export-import flows of commodities, should help to economize resources and promote structural change in the country. These economic methods and their further improvement will facilitate the smoother and fuller integration within the international division of labour of the mineral-commodities sector of the Soviet Union, which is proceeding with market reform based on multiple forms of ownership and the active involvement of foreign capital and managerial expertise in order to enhance the people's well-being and their economic and environmental security.

Annex IV

IS CONTINUED RELIANCE ON COMMODITIES AS AN ENGINE OF GROWTH A VIABLE OPTION?

Paper prepared by Mikhail PANKIN, Head of the Group on International Economy in International Department of the Central Committee of the CPSU

1. The fact of this question being up for discussion within the UNCTAD framework is in itself highly significant. A growing desire to reconsider familiar things in the light of new realities is evident everywhere today. UNCTAD cannot be an exception in this respect. In the three decades since it was created, a great deal has changed in the world at large, in the developing countries and in the trade and development sphere. It is from this standpoint that the situation in the developing countries' commodity economies and their place and role in modern economic growth processes can usefully be examined.

2. For most of the twentieth century, the commodities sector - agriculture and the extractive industries (here and throughout the text, not including the oil industry) - has been the main factor in the economic life of the overwhelming majority of developing countries. Thus, in the early 1960s it employed up to three quarters of those countries' total manpower, accounted for up to half of their gross domestic product and produced over 50 per cent of their export resources. Even then, however, there existed a group of developing countries in whose economies commodity production and exports played a relatively secondary role (the oil exporting countries and Hong Kong).

3. It is not easy to assess the contribution of the developing countries' commodity economies to economic growth over the past few decades. On the one hand, as everyone knows, agriculture as a whole never ceased to be an area with a low growth rate, although agricultural exports, to all appearances, were notably more dynamic. On the other hand, the development of industry, transport, trade and the services sphere as a whole - the dynamic sectors of the developing countries' national economies - was to a considerable extent related to the consumption and sale of agricultural output, including commodities, and to meeting the agricultural sector's demand for goods and services. Commodity exports have always acted as a major stimulus of economic growth. As a rule, favourable mean annual rates of economic growth have coincided in time with high commodity export growth rates (e.g. in the 1970s) and, conversely, economic growth has generally slowed down when commodity growth rates have been low (e.g. in the 1980s).

4. The present situation in the "third world" economy would seem to suggest that the role of commodities as an engine of growth is losing its universal character and should today be evaluated in the light of a number of new considerations.

5. The number of countries where the production and export of commodities is not of primary importance to economic growth has expanded considerably. They include, in the first place, 20 oil-exporting countries and 7 exporters of industrial products. To these may be added the 10 or so countries where the processing industries' share in GDP exceeds the combined shares of agriculture and the extractive industries, and roughly the same number of countries where the shares are approximately equal. Thus, at the end of the 1980s there were more than 40 developing countries in which the commodity sector could no longer be unequivocally described as the chief factor of economic growth.

6. When assessing the importance of commodity exports as a stimulus to growth under present day conditions it is necessary to bear in mind that the share of commodity exports in the total exports of developing countries which are not primarily exporters of oil or of industrial products fell from 81 per cent in 1968 to 49 per cent in 1988.

7. Moreover, given the developing countries' extremely onerous external indebtedness, the stimulating effect of commodity exports on economic growth is seriously diminished by the fact that a part - in many cases, the lion's share - of currency earnings from commodity exports has to be channelled to debt servicing. This cannot but reduce the role of commodity exports in the national economies' growth mechanisms.

8. A new factor which is gaining in importance is that of the high and still rising level of commodity imports into developing countries. These accounted for 20 per cent of world commodity imports in 1988 as against 14 per cent in 1970. Today, the volume of commodities and food which the developing countries are buying on world markets is equal to that bought by the United States of America and Japan together. Another and even more important fact is that by the end of the 1980s the developing countries' expenditure on commodity imports represented more than 80 per cent of their total commodity exports (48 per cent in 1968). It looks very much as if countries in this group will soon stop being net commodity exporters and become net commodity importers. By the end of the last decade, as many as 51 developing countries were already net commodity importers (in 1970, 32 countries). In 12 of them, commodity exports exceeded commodity imports several times over (in 1970, only 5), and in 6 countries, the excess was assessed at $1 billion or more each.

9. This trend must radically alter our ideas about the effects of the commodity factor on economic growth processes. For example, it is no longer possible to adapt a simple approach to commodity price policies on world markets. Traditionally, rises or falls in commodity prices - whether day-to-day fluctuations or long-term trends - have been evaluated in terms of the interests of the commodity-exporting developing countries. Today this approach is no longer adequate. The question of the interests of commodity-importing developing countries has assumed almost equal importance. It is fair to say that while a general rise in commodity prices would today stimulate growth in some developing countries, it would hold back growth in others. We are witnessing a recurrence of the phenomenon well known to everyone through the world oil trade.

10. Of course, for a large group of developing countries, and especially for the 55 countries, categorized by UNCTAD as being principally commodity-exporting, the commodity economy continues as before to play the role of the chief growth factor. However, in those countries, too, the shifts we have mentioned are taking place.

Moreover, the results of economic development over the past decades in countries of this type must give us pause. According to International Monetary Fund data, in the 1970s and 1980s the commodity-exporting countries (there is a 60 per cent overlap between the IMF category and the UNCTAD listing) had the lowest GDP growth rates, the lowest rate of accumulation and the highest inflation rates by comparison with other groups of developing countries (oil exporters, exporters of industrial products, exporters of services and recipients of private transfers of funds, and countries with a diversified export base).

In other words, a simple answer to the question which forms the title of this paper no longer seems possible today. The process of differentiation of developing countries is making it increasingly difficult to apply universal generalizations of any kind and compels us more and more often to operate with concepts applicable, at best, to separate groups of countries.

Complete assessments of both potential agricultural and mineral resources as a pre-condition for devising development strategies for the commodity sector

11. Irrespective of the role played by the commodities sector as a factor of economic growth in any specific developing country, the extent of the commodity resource endowment still largely determines the choice of development scenarios incorporated in economic strategies.

12. With regard to natural agricultural resources, it is particularly important to assess the possibility of bringing additional land under agriculture (according to some estimates, this may amount to as much as 25 per cent of land in agricultural use at present), as well as the possibilities of meeting the growing shortage of water resources. Highlighting scope for the developing countries to utilize the fishery resources of the world ocean and their internal waters is also assuming ever-increasing importance in the evaluation of the resource base of food and agricultural raw materials.

13. So far as mineral resources are concerned, the first fact that must be emphasized is the insufficient level of prospecting. According to some authorities, topographical surveys cover at best 15 to 20 per cent of the territory of developing countries, while specialized geological studies cover only a few per cent. Insufficient interest on the part of foreign investors is preventing a more complete evaluation of mineral resources being made. The 1970s, for example, saw reductions in the scale of costly exploration activities by mining transnational corporations in developing countries. Thus, while in the early 1960s the leading west European mining concerns were utilizing up to 60 per cent of funds earmarked for prospecting operations in the developing countries, by the mid-1970s that proportion had dropped to 15 per cent. A similar trend was maintained, although for different reasons, during the 1980s. According to information supplied by the United Nations Centre on Transnational Corporations, TNC investments during the past decade were concentrated (up to 85 per cent) in 18 developing countries, principally exporters of oil and industrial goods. No sign of a change in this trend has so far been observed in the 1990s. Yet without a steady inflow of foreign capital into this sector, accompanied by the transfer of technology and know-how, developing countries will simply not be in a position to carry out large-scale mineral prospecting operations and thus to produce a more complete assessment of their mineral resources.

14. The object pursued in evaluating commodity potentials with a view to drawing up development strategies is generally the two-fold one of strengthening the export base and meeting domestic demand for commodities. Domestic requirements generally predominate in assessing resources associated with food production. In view of the continuing acuteness of the food problem in a large part of the "third world", this is unlikely to change in the future. In the past the assessment of potential resources of industrial commodities (both agricultural and mineral) was, as a rule, principally related to the object of strengthening the export base, and this, it seems, will no longer continue to be quite the case.

In the first place, demand for commodities on the part of industry in the developing countries themselves is steadily growing. This is evidenced, in particular, by the growth of those countries' commodity imports, referred to earlier. The share of industrial raw materials produced in developing countries and utilized by their national industries is gradually increasing. This applies to cotton, rubber, tropical timber, metal ores, phosphates, etc.

On the other hand, requirements for expanding the export base in the future are becoming less clearly defined. Commodity prices on world markets remain at the depressed level inherited from the 1980s. There is regular over-production of many goods, and the level of stocks is uncomfortably high. In the medium term, demand for commodities is restricted by stagnation in the western industrialized countries' economies and by the deep economic crisis in the countries of eastern Europe and the Soviet Union.

15. A factor which continues to play an important role is the reduced consumption of natural raw materials per unit of output due to scientific and technical advances; another is the changing character and scale of demand for raw materials due to structural shifts in industry. True, according to estimates by the UNITAR secretariat the prospects in this respect today appear less unfavourable than some time ago. In particular, a number of new factors have been identified (fashion, the age structure of the population, public health and environmental requirements) which may ultimately stimulate demand for natural primary products in industrially developed countries.

16. At the same time, the scientific and technological revolution is accelerating, and its effects in the production sphere, as well as upon the very foundations of the life of society, are being more and more palpably felt. Throughout the world there is a growing feeling that the 1990s may herald a period of transition towards a new quality of world civilization. The information revolution, to use Ronald Reagan's expression, is leading us out of the economy of the industrial revolution, restricted by the limits of the earth's physical resources, into the hitherto unknown sphere of the "economy of thoughts". In this connection, bold voices are already suggesting that eventually information will displace and then replace natural resources in the production sphere. Concrete examples in this area are already to be found. The development of biotechnology, new materials, etc., is pushing in the same direction.

To this should be added the increasing global ecological threat, which, in particular, is radically modifying conventional ideas about the limits of industrialization of the traditional type and thus directly affecting the future of the commodity economy.

17. All this adds significantly to the problems of drawing up development strategies for the 1990s for "third world" countries. In particular, the question arises of whether and to what extent these strategies should be based on the consumption of ever-increasing volumes of industrial raw materials in the process of economic growth. The developing countries' commodity potential in the context of their development strategies must be assessed in the light of the factors described above.

The problem of limited opportunities to diversify, including the question of industry and market structures as a barrier to new entrants

18. During the past few decades, the trend towards diversification in its various forms has spread irreversibly throughout the developing countries. The concrete results of diversification are to be found in changes both in the developing countries' domestic economies and in their external economic relations.

Thus, according to information supplied by UNIDO, in the second half of the 1980s (1986) aggregate value added in the processing industries of the developing countries reached almost 60 per cent of the corresponding figure for the United States and almost 100 per cent of the figure for Japan. UNCTAD statistics, in turn, show that the share of industrial products in exports from developing countries (not counting fuels) rose from 16 per cent in 1965 to 69 per cent in 1987. To some extent, horizontal diversification processes, too, appear to have developed, although it is harder to trace their development using available statistics. In any event the emergence of new exporters on existing commodity markets has generally been of only secondary importance, although in isolated cases (such as that of cocoa in Malaysia) it did lead to perceptible shifts in the balance of forces between exporters.

19. The development of diversification processes encounters many difficulties. From the point of view of internal possibilities, these include poor development of the necessary infrastructure, shortage (if not total lack) of adequately qualified supervisory personnel, technological backwardness and lack of advanced techniques, and an acute shortage of financial resources. To these should be added, in the external economic sphere, the transnationalization of systems of production, sale and distribution, trade barriers for processed raw materials and finished products, and the developing countries' serious foreign currency problems associated with their external indebtedness.

20. These difficulties, with the possible exception of the effects of indebtedness and the latest manifestations of transnationalization, are in a sense traditional ones for the developing countries. Concern about them has been expressed in UNCTAD from the earliest years of its existence. The fact that, despite these difficulties, diversification processes have developed in a reasonably dynamic fashion suggests that the barriers they created were not insuperable. Here again, of course, the situation has varied between one group of countries and another.

Mention must be made, for example, of the results achieved by countries which embarked upon the path of diversification out of commodities - the newly industrializing countries - and those whose relations with the West have involved "offshore operations". Vertical diversification achieved the most appreciable results in countries with a sizeable potential domestic market towards which the new industry for the processing of raw materials (whether domestic or imported) was primarily oriented. A new impetus towards horizontal diversification was felt in countries where it could solve the problem of replacing the growing amounts of imported raw materials. All these factors can be expected to continue to play a role in the foreseeable future, and so to stimulate the further development of diversification processes.

21. The question of the end results of vertical diversification from the point of view of economic growth is, of course, highly controversial. As we all know, vertical diversification developed for the most part under "hothouse" conditions, as part of import substitution policies. As a result, the degree of inefficiency acceptable in the early stages was very often exceeded and many enterprises proved incapable of standing on their own feet many years after they had been established. For these reasons, the benefit derived by the national economies of developing countries from their processing industries is often small. Indeed, inefficient processing industries place a heavy burden upon their economies by absorbing a considerable part of budgetary and foreign currency funds.

22. Growing internationalization of production is creating new problems for diversification in the developing countries. The spread of transnational production systems conducting a single international production activity is a sign of the times. Such systems, based on the cooperative division of activities between enterprises located in different countries, are becoming a major form of relations by means of which a worldwide division of labour is being instituted. For the developing countries this creates the problem of choosing optimum diversification models which will enable them to engage in new forms of international production. The problem is rendered more difficult by the fact that the giant leap from the mechanical age to the age of electronics is causing the erosion of the main competitive advantage the "third world" enjoys on export markets for industrial goods, that of cheap labour. Meanwhile, the prospect of technical and economic incompatibility between the economies of the South and the North threatens because the economies of the bulk of developing countries would seem to be still qualitatively below the critical level at which effective interaction with more developed countries in the growing process of unified international production becomes possible.

23. The well-known Soviet economist Professor Sheinis has this to say on the subject: "Those niches in the world economy whereby countries could, in all safety and for long periods of time, derive advantages from participating in the international division of labour without the need for continuous economic restructuring are becoming a thing of the past. In other words, the need to involve at least some sectors of the economy in the worldwide process, to create industries which reach world standards of efficiency and to seek flexible forms of participation in the international division of labour has become imperative for many, and will eventually become imperative for most 'third world' countries."

Problems of market access for primary and processed commodities

24. The problem of access to the markets of countries importing and consuming commodities and the products of commodity processing (in the first place, of course, the industrially developed countries) has not only not lost any of its urgency for the developing countries but, on the contrary, is growing more acute.

25. Customs tariffs in the industrially developed countries, even where they remain unchanged, are becoming increasingly onerous for the developing countries as the share of finished and semi-finished products in their exports increases. The principle that operates is that tariff rates rise with the changeover from unprocessed commodities to finished products. Latin America, for example, is now exporting more cocoa products, in terms of value, than cocoa beans, and the customs barrier for this portion of its exports has risen from 3 to 12-16 per cent in the EEC countries, from 0 to 2.5-21.5 per cent in Japan and from 0 to 0.4 per cent in the United States.

26. Non-tariff restrictive measures have been appreciably reinforced during the 1980s. According to World Bank estimates, the proportion of imports subject to non-tariff restrictions (principally in the form of voluntary export restrictions and import quotas) has increased by 20 per cent in North America and the European Communities. According to UNCTAD data, during the period between 1981 and 1988 the industrially developed countries raised from 13.4 to 14.1 per cent the percentage of goods reaching their markets from the "third world" which were subject to non-tariff controls.

27. Subsidies in support of agricultural production in the industrially developed countries are still the most serious barrier to exports from developing countries, and the question of eliminating or at least substantially reducing them continues to be a stumbling block to progress in the Uruguay Round.

28. Furthermore, the problem of market access for developing countries cannot be reduced to tariff and non-tariff barriers at the frontiers of the importing countries and the policy of subsidizing domestic output. The role of the monopolistic and oligopolistic structures of the industrially developed part of the world in the sphere of marketing and distribution of commodities and products of commodity processing has to be viewed from the same angle. Suffice it to recall that, according to UNCTAD data, by the beginning of the 1980s the TNCs controlled the marketing and distribution of the main forms of commodities exported by the developing countries to the extent, in the vast majority of cases, of 75 to 90 per cent of their export value.

Of course it cannot be denied that the TNCs' system of marketing and distributing commodities in the process of transfer from producer to consumer is the most efficient under present-day conditions. The problem lies in the excessively high price that commodity producers in developing countries pay to use this system. Current practice in this field has not yet been thoroughly researched. Some estimates suggest, however, that earnings from TNCs' intermediary operations involving commodities often substantially exceed those derived from commodity production activities in developing countries.

29. Is it reasonable to expect that access for commodities and products of commodity processing from developing countries to the markets of their main consumers will improve in the foreseeable future, leading to a rise in the efficiency of the commodity sector and its contribution to the economic development of the "third world"?

30. As for the problem of tariff and non-tariff barriers and agricultural subsidies, this mainly depends, as we know, on the outcome of the Uruguay Round, which still cannot be predicted with any degree of certainty. All that can be said is that whatever the outcome of the Uruguay Round, protectionism is unlikely to depart from the scene in the 1990s, especially if we bear in mind that available forecasts agree in anticipating slow rates of economic growth until the end of the century.

31. Radical changes in the economies of the USSR and the countries of central and eastern Europe as a result of the changeover to a market economy are leading, inter alia, to the adoption of universally accepted means of tariff and non-tariff regulation of imports, including imports from developing countries. It is difficult at present to say what the end result will be, but the possibility that access to this region's markets will become more difficult for goods from developing countries cannot be excluded.

32. The question of more efficient use being made of marketing and distribution systems by the developing countries so as to raise the effectiveness of their export effort can, of course, be considered in terms of their creating their own alternative structures to compete with, or to oppose, the existing monopolistic or oligopolistic structures. The problem is, however, that these latter structures are already, as it were, "built in" to the "new order" which is rapidly coming into existence on the basis of the internationalization and globalization of world economics and finance. For newly established structures - which, moreover, would be based on less developed economies - the key problem may be that of compatibility with existing mechanisms for international production of goods and systems for bringing those goods to the end user.

In South-South relations, of course, the developing countries' prospects of achieving control over the marketing and distribution of commodities and products of commodity processing are relatively favourable. In relations between the South and the North, it may prove preferable to seek various forms of linkage between the developing countries' national and multinational marketing and sales structures and the monopolistic and oligopolistic structures of the West.

Ability to develop linkages between the commodity and other sectors

33. A commodity sector's real contribution towards a national economy's development is largely determined by the intensity of its linkages with other sectors. Of course, even if production of a commodity for export forms an enclave within the national economy and maintains virtually no direct production relations with the principal sectors, it still contributes to the national economy's development both through budget allocations and wage payments and, indirectly, through imports of goods and services paid for out of foreign currency earnings derived from exports of the commodity. However, the commodity sector's inherent ability to generate development can be utilized with increasing success only to the extent that this sector directly participates in the social division of labour and in the national economy's system of intersectoral and intra-sectoral production relations.

34. The development strategies of "third world" countries devote special attention to the development of intersectoral links, especially between agriculture and industry. The development of industry based on local agricultural raw materials is generally assigned priority status. Many countries encourage the establishment of agro-industrial complexes and the formation of small cooperative enterprises to process agricultural raw materials. In parallel with this, a vigorous feedback process is taking place between industry and agriculture, the former supplying the latter with irrigation equipment, mechanical and non-mechanical agricultural equipment, mineral fertilizers and pesticides and industrial construction materials.

35. Processes of integration of the developing countries' extractive industries in their national economies have also reached a fairly advanced stage. The fact that ever-increasing quantities of the raw minerals extracted are being processed inside the developing countries themselves gives a certain idea of the degree to which links between the extractive industry and other sectors have developed. Thus, according to UNCTAD statistics, more than 75 per cent of tin, copper and nickel ores, over 50 per cent of lead ore and sulphur, over 30 per cent of iron and manganese ores, bauxites and raw phosphates and over 20 per cent of tungsten ore were processed in 1988 in their countries of extraction. Of course, the feedback between the extractive

industry and other economic sectors is not yet fully developed, and the demand of the former for many types of equipment and materials cannot yet be met by industry within the countries concerned.

36. The further development of these processes will depend on solutions being found to more or less the same range of problems as those encountered by developing countries in the process of diversifying their commodity economies and advancing towards industrialization.

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In considering the future of the commodity economy in the "third world" and ways of increasing its contribution to economic growth and modernization in the developing countries, it is important not to overlook historical experience. The examples it offers are of different kinds. In some cases, countries having no commodity resources of their own (Japan, Switzerland, Hong Kong and Singapore) have achieved levels of economic development ahead of world standards. Elsewhere, a country's wealth of commodity resources and the large-scale utilization of those resources in the economic cycle have failed to rid the country of economic problems which have grown in magnitude over the decades, culminating in prolonged and profound economic crisis (the Soviet Union). Lastly, it must be noted that impressive economic results have been achieved by "third world" countries with a certain commodity potential which have opted for diversification out of commodities.

All the points we have made are of course, matter for reflection rather than arguments in favour of an answer to the question which forms the title of this paper.

Furthermore, the future of the commodity economy also largely depends on factors which have become apparent only very recently. Let us mention just two of them. The first is the growing threat of an ecological catastrophe. The second is the in-depth restructuring of the world economy founded on the latest achievements of the scientific and technological revolution.

The interrelationship between ecology and commodity problems forms a separate topic for discussion at this round table. I should only like to recall something said by M.S. Gorbachev in his statement at the United Nations in 1988. "The growth of the world economy," he said, "reveals the contradictions and limits inherent in traditional-type industrialization. Its further extension and intensification spell environmental catastrophe.... Hence the need to begin a search for a fundamentally new type of industrial progress".

As for the impact of the scientific and technological revolution on the commodity economy, that is a problem which used to be at the centre of attention in UNCTAD. Today, however, the point at issue is not only - or perhaps not so much - the competition offered by synthetic materials and the adoption of resource-saving techniques as the integrated effects of the impending "information revolution" on all aspects of commodity economy, and in particular on commodity marketing and distribution. This is a question that deserves study.

Annex V

WHAT WILL BE THE EFFECT ON COMMODITIES OF INCREASED ENVIRONMENTAL AND HEALTH CONSIDERATIONS?

Paper prepared by Paulo NOGUEIRA-BATISTA, Ambassador, Visiting Professor
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1. The growing environmental and health concerns can affect commodities in many ways. Effects will differ considerably, depending on whether or not commodities are produced from renewable or non-renewable resources; on whether they are agricultural commodities - food, beverages, raw materials - or mineral ones. The specific methods for their production, processing and transportation may result in different environmental or health implications. Effects will vary too in accordance with the resources-population ratio in producing countries or, in the end, on how commodities are consumed. The probability is that for most of these effects developing countries will encounter additional burdens if not obstacles to their development aspirations. It is only by new forms of international co-operation that the additional constraints may be overcome.

2. Preoccupation with the environment is indeed a many-sided question. It has emerged mainly as a concern about the degradation of the local natural environment resulting from production processes and industrial waste. But it has also become a concern about the impact of human activity in general - as producers or consumers - on environmental assets traditionally regarded as "free goods", such as air and climate. It became a concern for health conditions as production processes, the end-use of products and environment degradation resulting from the interplay of man and nature affect human, animal or plant life. Indeed the environment question has to do with the conservation and management of limited natural resources which have been exploited recklessly the world over, as if they were inexhaustible, for the benefit of the more advanced countries but with considerable detrimental effects for the global environment.

3. Scientific and technological progress had made people confident, at least in the developed world, that scarcity, the traditional economic problem, had for all practical purposes been overcome. In the so-called post-industrial society, the question seems to have become what to do with growing availability of time for non working activities, i.e., how to organize leisure. Ecological concerns bring back the scarcity question again to the forefront and it does so in disturbing ways: the traditional Malthusian worry about the human ability to produce enough food for an ever-growing population together with a neo-Malthusian concern of not being able to produce what is needed by modern consumption standards without hurting man by wanton destruction of his environment.

4. The steep increase of CO_2 accumulation in the atmosphere, which is seen as the source of a possible and dramatic climate change of global implications, is directly correlated with the start of the industrial revolution and the level of consumption of fossil fuels in the developed world. A phenomenon which inevitably associates progress and wealth with a global threat to life on Earth but that should not make us unaware of the ecological implications of underdevelopment itself.

5. This is the new background against which the discussion of economic issues must, more and more, take place, a background which makes it possible for us not to be surprised with the bluntness of some of the questions put to us in this Round-Table. It looks as if we have already come to assume, as stated in the sub-items of the general topic we are now discussing, that there is an unavoidable conflict "between the need to produce more food and increase agricultural exports and the need to stabilize and improve the ecological balance" as well as "between the exploitation of mineral resource endowments and preservation and protection of the environment". The existence of such "conflicts" has, in truth, been suggested as the starting point for our deliberations on how to elaborate "new approaches to national and international commodity policies".

6. The realization that conflict between economic needs and environment preservation is an inherent factor in the relationship between man and nature, should indeed be seen as a step forward. It can be a very constructive one if it can make man ponder about the need for a reassessment of some very basic assumptions of current economics. We seem, in truth, to be confronted with the need for a new science of economics, one which will treat the consumption of non-renewable or of seemingly unlimited resources as a minus in the calculation of economic growth and of productivity. In other words, the question of whether or not the use of non-renewable resources should not be looked at as capital consumption.

7. In such new surroundings, yet to be fully explored, one should be wary of being carried away by simplistic notions, either by the optimistic view that such conflicts will be resolved by a continued reliance on unlimited possibilities for scientific or technological progress or, alternatively, by the pessimistic perception that the way to save future generations from impending major threats to the global environment is to slow down the average modest economic development of underdeveloped countries and their high demographic growth. Circumstances are still very uncertain as the scientific foundations for our concerns have not yet been firmly established and essential questions have not yet been precisely formulated. In this context, it will be extremely important to avoid general formulations that, by giving automatic priority to environmental concerns, may unnecessarily compromise the fulfilment of development aspirations. What seems to be required is a careful examination, on a case-by-case basis, of whether or not there are acceptable environmental costs, of a local or global dimension, for pursuing economic growth.

8. To state on a rather pre-conceived basis that environmental concerns must, by necessity, prevail over development would be tantamount to saying that development is only possible for those who already have achieved it. In other words, that economic development along the lines followed by the already developed nations may not be any more, or will not be for some time, an option for the majority of mankind. The carrying capacity of our spaceship cannot be assured, for instance, by concentrating efforts to keep intact renewable resources, such as the living tropical forests on the surface of the Earth, in the name of conservation of biodiversity or as a "sink" for excessive CO_2 emissions resulting from the increasing burning of the "pre-historic and dead forests" which lie underground, the non-renewable resources that constitute the main source of energy for our industrial civilization.

9. These are hard questions for all countries, for those making a disproportionate use of world resources as well as for the less privileged ones. For these, economic stagnation or retrogression will not only mean human degradation but may also have a terrible local environmental cost.

Poverty, or should I say misery, may, indeed, pollute the local environment as much as or even more than wealth pollutes the global environment and, certainly, at a much greater direct human cost. If the economic growth of the great majority of the world population is not any more environmentally sustainable from a global perspective, severe international tensions will emerge in terms, among other things, of world migratory movements of unheard dimensions.

10. We are forced to deal, out of human solidarity or of enlightened self-interest, with the question of the ecological sustainability of the levels of economic growth in the developed world as well as with the question of the feasibility of economic development of the underdeveloped nations. Can we produce more without hurting the local and the global environment? Where can it be done at a lesser cost to the environment? Should we produce less not to hurt it? Can consumption be checked or stabilized, through demographic control measures in the South or through new consumption patterns in the North? What changes in the life-style of developed nations can be envisioned? If the survival of future generations should not be challenged, what is to be done to ensure the survival of the existing one, or to put it differently, what would be our answer to the question of "equity between generations"? To conclude, how should the required sacrifices be shared: ought the polluter to pay in proportion to the damage he inflicts or should he not pay also in accordance with his ability to pay?

11. The consumption of fossil fuels - particularly of oil - is a matter of specific concern for it affects not only the availability of resources but at the same time the level of pollution at the local and at the global level. At current rates of world consumption existing oil reserves would be enough for the next four decades. On the assumption of a world population of 10 billion inhabitants consuming at the level the United States does today, existing reserves would be almost entirely depleted by the year 2030. We will face a major problem even if we accept that per capita consumption in the United States is not necessarily the best parameter for it is double that of Western Europe with an equivalent if not superior quality of life.

12. Estimates show that a considerable change in terms of increased efficiency in production and in use of oil as well as in its pricing will be required. That would be roughly the same situation as regards coal, which though more plentiful and better distributed from a geographical viewpoint, is nevertheless considerably more polluting than oil. Oil is, in effect, a particularly interesting case in the North-South relationship. The largest reserves are located in the developing world - particularly in countries with low population density and minimal levels of consumption - while the great majority of consumption takes place in the industrialized countries. It is not in the long-run interest of both the industrialized and of the underdeveloped world to encourage the development of alternative sources of energy. In that connection, it will be of great interest to observe what will be the effect of low-priced oil probably resulting from the re-establishment of the United States' dominance of Middle East oil reserves and production.

13. The conflict between the need to produce more food and increase agricultural exports and the need to stabilize and improve the ecological balance - one of our specific queries - is, by itself, a difficult question to deal with, one which is to a certain extent closely related with high levels of energy consumption in the industrialized countries. The production of food up to the middle of this century had essentially grown as the result of expansion of the cultivated areas. Since then, and up to the middle eighties,

4/5 of the growth of food output came from increases in productivity. While the harvested area expanded in the period by about 24%, food production doubled. World grain yield per hectare has in fact more than doubled. New technologies - new varieties, fertilizers, pesticides - together with government-sponsored programmes were the key to this "green revolution", which resulted in many countries becoming self-sufficient and others becoming exporters. Food production grew on a per capita basis and export prices have fallen considerably.

14. These are bewildering and disturbing questions. Modern agriculture, in truth, involves in fully developed countries commercial energy inputs that are more than 100 times those of traditional agriculture in less developed countries, in order to increase productivity by hectare by a factor of four to five times at best. Such levels of energy consumption, of course, affect negatively the availability of energy resources and increase the challenges to the global environment. Modern agriculture, by depending heavily on the increased use of fertilizers and pesticides, which no doubt greatly increase productivity, unfortunately produce serious side effects for the health mainly of those directly involved in production but also for the consumers.

15. The overuse of chemical fertilizers and pesticides has resulted in pollution of ground-water aquifers and in soil erosion and soil acidification. It has had bad health effects for the farmers themselves. All in all, we seem, now, to have reached a plateau in terms of agricultural productivity and to be faced at the same time with constraints in terms of land and of technology. Population pressure is also becoming in many areas of the under-developed world an additional factor of land degradation.

16. There is thus an over-supply of food in international markets, resulting from the general rise in world output due to the "green revolution" and to massive subsidization of temperate products by developed producers such as the United States and the European Communities. Only the Soviet Union and Japan remain as major food importers. As can be seen from the impasse in the Uruguay Round of Trade Negotiations on the liberalization of agriculture trade, subsidization will at best be reduced slowly. This affects the export prospects of countries, in particular of those relying excessively on the production for export of food commodities. This has coincided with the emergence of hunger in many least-developed countries unable, due to declining productivity, to produce enough food for domestic consumption or to generate other export earnings to import food, even at lower prices. Hunger in many underdeveloped regions of the world - mainly in Africa - is tragic evidence of how poverty can survive amidst plenty.

17. One cannot exclude the possibility of new technological improvements (a) which may prolong the availability of relatively scarce non-renewable resources - either by raising the productivity of their extraction processes, by making a more rational use of them or simply by conservation measures and (b) which may make the production and consumption of such resources less inimical or more friendly in terms of environment degradation. But this may not be entirely certain and will in any case take much time to materialize. Before new and better technologies become commercially available, we will have to go through a transition period and face unavoidable hard choices.

18. Commodities are generally looked at as a subject of particular interest to developing countries in as much as they may represent for many of them a considerable proportion of their total economic activity and of their exports. Industrialized nations, for which commodities are but a marginal component of their total production, have nonetheless become strong

competitors of developing ones in commodity trade, not only as growing producers of agricultural commodities for their own needs and for export, but also as producers of substitute materials for agricultural and mineral commodities. Prospects are thus very difficult for developing producers which have to face now the additional bill of environment preservation in mineral as well as in agricultural production.

19. Although not prompted by ecological considerations, some very tangible technological developments are already at hand, especially as regard non-agricultural commodities. The production of goods is turning more and more intensive in terms of both capital and technology. There is a steady drop in the use of labour and raw-materials, as can be seen in particular in the case of Japan, but also in other highly industrialized nations. To produce 100 hundred pounds of fiberglass cable capable of transmitting as many telephone messages as does one ton of copper, 20 times less energy is required. This and other developments seem to point more and more in the direction of an economic development less dependent on the production of commodities, whose prices are bound to fall even more steeply in relation to industrial prices. In such a context, importation of food may indeed be a better allocation of resources than to produce it for export or even for the domestic market.

20. The traditional approach to commodity trade has been that of suggesting the classical international division of labour within which some countries would benefit from specializing in the production of commodities and others would profit from concentration on industrial goods. Natural comparative advantage which would underpin such a world economic order has been, however, systematically eroded, on the one hand, by the intrinsic adverse terms of trade for the commodity exporters and, on the other, by the protectionist policies or practices of the industrialized countries themselves. Attempts to increase or even to merely stabilize the price of commodities - by co-operative action between producers and consumers - have in the main failed as a result of the industrialized nations' policies to protect at any cost in some instances their consumers and in others their producers.

21. The growing environmental concerns, in spite of the challenge they represent for commodity producers, especially for the developing ones, may, in the end, open the way for new approaches for national and international action. These concerns seem to show that the world is indeed one and that the relationship between advanced and backward nations must be one of effective interdependence rather than that of a reinforced dependence or of an alleged growing de-coupling.

22. Sustainable development must be a goal for all nations which, in principle, cannot be achieved by the mere operation of the market forces in a world context of marked asymmetry and unavoidable imperfect competition. It will require planning as well as strong regulatory action by governments, at the domestic as well as at the international level, to ensure the free movement among nations of goods and capital, of people and technology. Such a serious matter should not, of course, be left solely to the bureaucratic whims of already too powerful central Governments, as an opportunity for unduly enlarging the role of the State. Planning and regulation can and ought to be carried out by democratic means, in a decentralized manner, with the full and direct participation of all segments of society. It will mean more not less opportunities for international co-operation.

23. International co-operation should not be restricted to financial transfers aiming essentially at adjusting the production policies of developing countries to the global environmental and health concerns of the developed ones. It has to be a two-way street in which the developed countries will have to accept obligations as regards their own life-styles and production methods. One cannot reasonably expect, for instance, producers of commodities with known harmful effects to restrain their production without the alternative of other crops or without firm commitments by the consuming countries to stop their consumption of such commodities. Drug control agreements, for example, should be broadened to include the economic implications to developing countries of the ban on production of harmful commodities as well as the obligation of countries not to export domestically prohibited goods.

24. International co-operation will have to include, in some way, the question of the means to better handle the problem of waste disposal. To avoid dumping by merely resorting to re-cycling may have counter-effects not only in terms of depressing the export prices of the original raw-materials but as well as in terms of the high consumption of energy and of the polluting consequences of the conversion of scrap.

25. Environmental and health concerns represent a challenge that offers an opportunity for developed and developing nations to take a good look at the possibility of forging an alliance to deal with the new aspects of world interdependence. They offer, in particular, the occasion for an in-depth reassessment of the usefulness of commodity agreements, albeit, in a new formulation. Why not, for instance, conceive of new commodity agreements, which would go beyond the traditional effort of balancing supply and demand as a means of ensuring the export earnings of those developing countries particularly dependent on their export? Why not conceive, as well, of commodity agreements which would remunerate the producers at prices that would encourage a better and more rational use of natural resources? Why not think, moreover, of dealing in the context of such enlarged commodity agreements with the question of improving market access by elimination of trade barriers and subsidies? Commodity agreements could, in fact, be conceived too as a mechanism for the explicit transfer of financial resources and technology for the preservation of the local and the global environment.

26. For all such things to become possible, the negotiation of commodity agreements would probably have to be conducted in a broader multilateral framework. It should include, under the co-ordination of UNCTAD, the participation of international institutions involved in trade, development financing, technology transfer and in environment preservation, such as the GATT, the IMF, the World Bank, WIPO and UNEP.

27. This might be one way of making sure that in caring for the environment the key approach would be burden-sharing rather than burden-shifting and to test the willingness of developed countries to accept their responsibility as main polluters of the global environment and as holders of the financial and technological means the world requires to be in a position to meet the ecological challenge.

28. In the absence of such a new and broader approach to commodity agreements, commodity exports may not, in truth, constitute an option developing countries may feel free to exercise. Many of them, for lack of alternatives, may, in fact, find themselves condemned to continue to rely on that traditional path. In any case, it is very hard to conceive of commodity exports - particularly the agricultural ones - as the "engine of growth" for the economic development of developing countries.

29. Technology transfers may well be one of the keys to the possibility of ecologically sustainable development. As we find ourselves at the threshold of a new technology era - that of less polluting technologies - there will be a great need to consider ways and means to actively promote the diffusion of the new techniques from the developed to the developing world. Here more than anywhere else is the need to forge a new alliance for the benefit of development and environment. The revision of the international standards concerning the protection of intellectual property should be conducted with a view to facilitating, not hampering, the process of technology transfer. It should, in principle, be effected on a concessional basis. At worst, it could be carried out "at cost", if necessary by subsidization by their own Governments or by international institutions. The most important thing, however, is to make sure that the patent holder remains under an obligation to licence local producers.

30. Assurances will be needed for the protection of the sovereign and economic rights of developing countries when dealing with new commodities which may become tradable as a result of the economic exploration of living natural resources. These resources cannot, on the one hand, be seen as a "a common heritage of mankind" the conservation of which would be a collective responsibility. Nor is it reasonable to expect, on the other hand, that those countries with the scientific and industrial capacity to convert the wild species for industrial or medical use will be granted an automatic right of access to those resources.

31. A final word, having regard to the question of industrial location in the new context of environmental concerns. Developing countries should be very much aware of the risks of asking for special treatment in the observation of new international standards on environment protection. To request, as was done in the Montreal Convention on the Protection of the Ozone Layer, more time to continue to use more polluting industries may, in fact, be a self-defeating objective. It will negatively affect the competitive position in international trade of developing countries making use of the license to pollute and imply acceptance, even if on a provisional basis, of a somewhat perverted international division of labour based on a negative conception of comparative advantage.

32. The above holds true even if countries may vary in their capacity to absorb pollution. Developing countries should, in principle, say "no" to the concept of "sale of polluting rights" which is implied in request granted in the Montreal Protocol. Special treatment for developing countries is a very important concept that should not be compromised by short-term considerations. It should apply essentially to what is really vital for them in the medium and in the long run, to wit, firm assurances of technology transfer.

Annex VI

CAN TECHNOLOGY PROVIDE A SOLUTION TO THE PROBLEMS OF THE COMMODITY SECTOR?

Paper prepared by Alex DUNCAN and Shujie YAO, Food Studies Group,
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Technology and the problems of the commodity sectors

A. What are the problems?

We take there to be three main problems for the purpose of the present discussion.

(i) For many internationally traded primary commodities, market prospects are poor. Prices are likely to be low and variable.

Here the basic problem is a tendency for the rate of increase in production to exceed the rate of increase in demand in the main markets. Recent estimates of the income elasticity of demand in the main developed-country markets for tropical agricultural exports distinguishes sharply between the stagnation for traditional exports, and buoyancy for some new ones:

	Income elasticity of demand in developed country markets
Coffee	0.47
Cocoa	0.18
Banana and plantain	0.58
Tea	0.52
Pineapples	1.59
Tomatoes	1.63

Source: Islam and Subramanian (1989)

(ii) The overdependence of many countries on exports of a small number of these commodities.

The significance of the poor market prospects is magnified by the continuing overdependence of some, but not all, parts of the developing world on primary commodities.

Primary commodities as a percentage of total exports.

	1965	1980	1987
South Asia	63	45	36
Middle-income Africa	95	89	90
Low-income Africa	92	98	94

Source: World Bank (1989)

The inability of some economies to diversify out of primary commodity sectors leaves them vulnerable to the inelasticity of demand with respect to price in the main consuming markets.

	Price elasticity of demand
Coffee	-0.27
Cocoa	-0.19
Banana and plantain	-0.40
Tea	0.06
Pineapples	-2.67
Tomatoes	0.17

Source: Islam and Subramanian (1989)

These figures show elasticities for developing country exporters as a whole. Where supply tends to increase faster than demand, the figures go a long way to indicating the bind exporters are in: large price falls are needed to equilibrate supply and demand.

But the figures do not reveal a key difficulty for some producers of primary commodities. Demand is price-inelastic for exporters as a whole, but for individual exporting countries, elasticity may be high --- that is they can attract buyers by a modest reduction in price. But this will be at the expense of other exporters. This is indeed what has happened. Over the past two or three decades, Africa has lost market share, while other parts of the world have gained it through more dynamic production and aggressive marketing --- but with the effect of driving down prices.

The figures also point to a major dilemma for --- or perhaps flaw in --- structural adjustment and stabilization programmes as they are at present applied to many third world primary commodity exporters. These are based on the 'small-country argument' --- that is that an individual exporter can raise production without depressing the world market price. Individually this is true with the exception of some countries for some commodities such as Ghana for cocoa. But the argument fails when efforts across many countries to promote the production and export of a few tradable commodities leads to significant aggregate production increases --- and an inevitable decline in price (Stewart 1990).

(iii) In some parts of the world for some commodities, difficulties arise in keeping production up with requirements.

The first two problems reflect in part the nature of the markets faced by third world commodity exporters. The third problem is a different one. Some regions and countries have production problems, whether for export commodities or those intended for domestic use, such that the rate of growth of production is below that called for by market conditions. This may lead in international traded commodities to loss of market share; or for internally consumed commodities, to shortfalls which may disadvantage local industries or consumers and undermine the economy. Declining per capita availability of foodstuffs in sub-Saharan Africa is an example of this.

These three problems --- poor export markets, overdependence on primary exports, and production constraints --- clearly result from different causes and are not uniform between countries and commodities. Accordingly, the extent to which technological development can contribute to their resolution or exacerbates the difficulties, is the focus of the rest of this paper.

B. Technology, commodities and economic development.

The relationship between technology and commodities can be usefully classified into three stages of development ([1]).

(1) The age of intensive material use. This is characterized by the current situation of most of the LDCs and the economies of most developed countries in the late 19th and early 20th centuries. A distinct feature at this stage of development is that economic expansion relies heavily on intensive input of agricultural commodities and industrial raw materials. The industrial revolution in the West was based largely on radical improvements of production and processing techniques which enabled mass production and substantial reduction of unit product costs of different commodities. In the first stage of the industrial revolution, the proportion of material input per unit of value added and per capita increased drastically.

A typical example is the consumption of steel in the U.S. economy between 1880 and 1925 during which the input of steel per $1000 of GNP at 1958 prices increased from 75kg to almost 200kg (figure 1). Other basic materials which show a similar pattern of intensity, although with different timing, include cement, paper, chlorine, aluminum, ammonia and ethylene. Present-day more rural societies similarly show a high level of basic commodities per unit of GDP.

Consumption patterns reflect production patterns: at the relatively low income levels characterizing these societies, propensities are high to purchase foodstuffs and other consumer items with substantial material content.

(2) The age of technology, in which high levels of technology both in physical production and processing and in information management are adopted. In this stage, the role played by technology in

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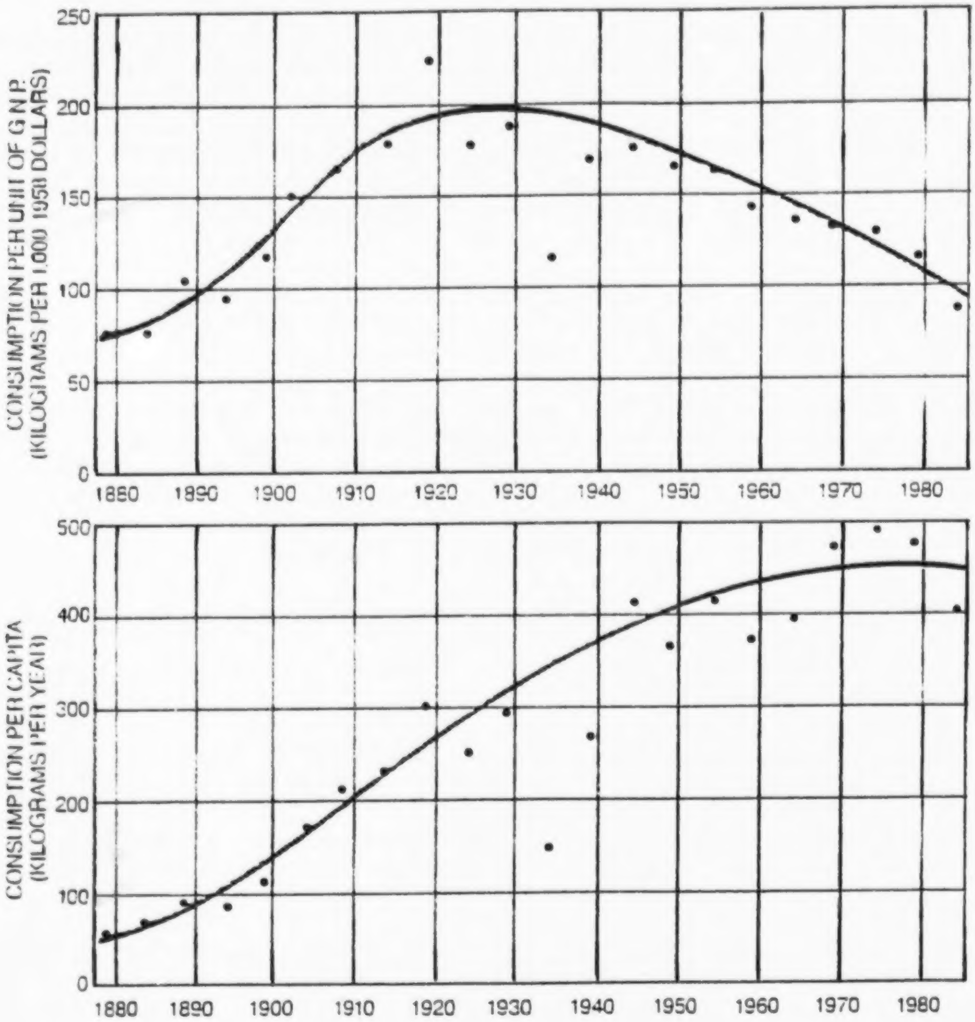
[1]. These thoughts were stimulated by Larson et al (1986.)

Figure 1



STEEL CONSUMPTION in the U.S. illustrates the classic cycle of changes in demand for a basic material. The upper panel shows the consumption of steel in kilograms per $1,000 of Gross National Product (G.N.P.). The lower panel shows consumption in kilograms per capita. In the early part of the cycle demand increases rapidly according to both measures. At some time consumption per unit of G.N.P., which indicates the relative importance of the material in the economy, reaches a peak and begins to decline. Steel consumption reached that point in about 1920. Per capita consumption continues to grow after that, but in the last stages of the cycle per capita consumption levels off and may even decline.

Source: Larson (1986)

stimulating economic growth has become more dominant and the input of materials per unit of value-added has a long term tendency of decline. This stage, which characterizes the current situation of the most advanced industrial economies in the 1980s, is associated with high levels of income, and high income-elasticities of demand for goods and services which have low raw materials content. It is these developed economies which represent much of the demand for the exports of developing country primary commodity producers.

In the U.S., for example, the inputs of raw materials mentioned above per unit of GNP declined sharply in the late 1970s and the 1980s (figure 2). It is possible in this stage of development that economic expansion can rely on constant or even declining amounts of traditional inputs. The consequence of such development is that the demand and the prices of such traditional commodities will be depressed and countries which produce such products will suffer as a result.

(3) The transition, in which many developing countries find themselves, in which large sectors are material-intensive, but with some sectors having adopted capital-intensive, high-technology elements. Technology progressively plays a more significant role in economic expansion, and the growth of GNP is characterised by two elements: the increasing substitution of one material with another, and a more efficient use of materials in production and processing. Patterns of production and consumption are complex, varying considerably by sector, and within some sectors where both modern and traditional production systems coexist.

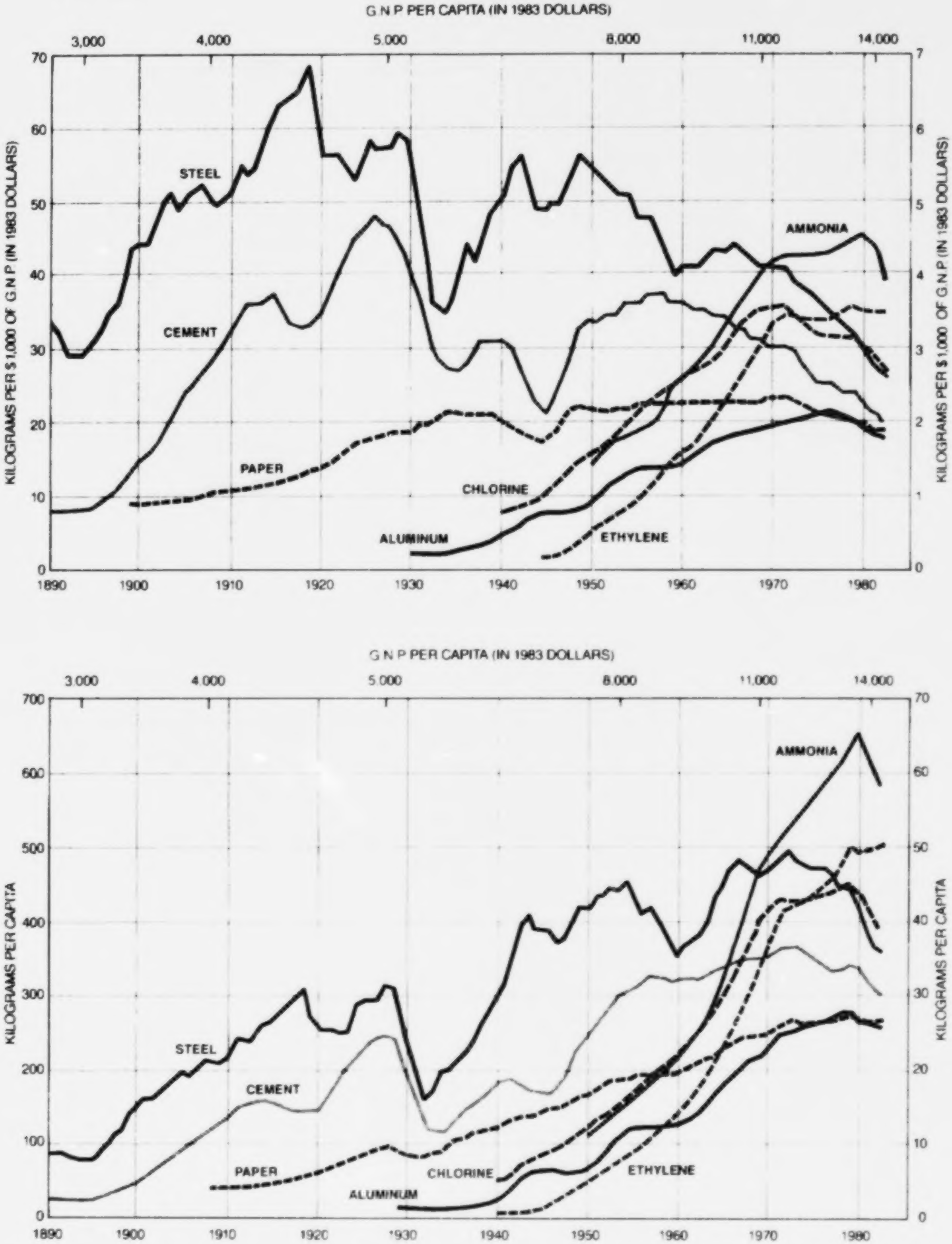
C Effects of technology on the supply of commodities.

Technological change has two broad, inter-related, effects on supply of primary commodities.

(i) Total supply expands as new technology makes available new opportunities for growth. In mining, metals can be extracted from lower grade ore; in oil, formerly inaccessible areas can be reached; and in agriculture new means become available of optimising the use of the limiting factor of production.

This effect can be very powerful over time, with an international impact. Figure 3 illustrates crop yields in the US over 60 years which explain much of that country's success in international agricultural trade.

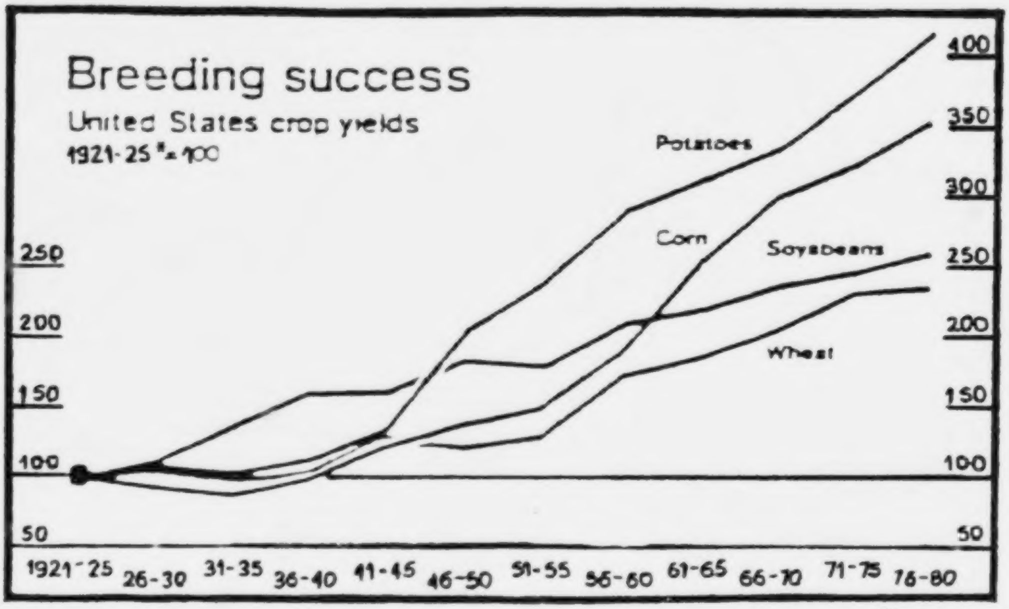
Figure 2



TRENDS IN CONSUMPTION of seven materials exemplify the overall fate of basic materials in the U.S. Among the seven are two "traditional" materials in addition to steel: cement and paper. The others are "modern" materials: aluminum, ammonia, chlorine and ethylene. Consumption of the traditional materials peaked long before that of the modern ones, but use of all seven is now declining relative to G.N.P. (*upper panel*). For most of these materials per capita consumption is also declining (*lower panel*). The scale at the top of each panel shows G.N.P. per capita. As it suggests, the diminished role of basic materials is related to increasing affluence.

Source: Larson (1986)

Figure 3



Source: USDA

*Average

An important example of technology relieving a scarce factor of production and of increasing total supply is given by the Green Revolution and wheat in the Indian Punjab. Modern varieties of wheat introduced in the mid-sixties helped increase the yield of wheat from about 1.1 tons per hectare in the pre-modern varieties period (1954-57) to nearly 2.7 tons in 1969-70 (Ranade et al, table 11.1). This technology raised returns to land and water and, further, stimulated additional investment in expanding the supply of these factors, particularly irrigation water. The total effect on the Indian economy was considerable, with higher and more stable supply of key food commodities meaning that the economy did not grind to a halt under the impact of growing food deficits or every time the monsoon failed.

The inability of other parts of the world, most notably sub-Saharan Africa, to find a similar widely applicable technology is a significant part of their failure to resolve Problem (iii) noted above.

One of the most powerful current examples is given by EEC agriculture, where a policy framework has stimulated the development and adoption of technology which has turned the world's biggest importing region to self-sufficiency and surplus.

(ii) The cost of production can be reduced.

There has been a long-term tendency (i.e.over about a century) for the real prices os many basic commodities to fall, in good measure as a result of falling production cost. Technology is one explaining factor, among others. In the Indian Punjab example given above, over the same span of time as per hectare yield rose

145%, total costs per hectare rose 73%. Within the bundle of total costs, purchased inputs (eg. hired labour, machines, seeds, fertilizers, and irrigation) increased faster than the rest, by almost two and a half times per hectare (ibid.) This indicates a further impart effect of technology-induced growth: to stimulate factor markets through backward linkages to factor markets.

Advances in biotechnology both promise and threaten to intensify the effects of technology in expanding supply and reducing costs. What genetic engineering in particular allows is a much more rapid means of introducing new characteristics to varieties as compared with traditional plant breeding techniques. What are the possibilities? First, supply may be increased through rasing the potential yield ceiling under normal field conditions. This will allow higher levels of complementary inputs to achieve economic rates of return (the Green Revolution effect extended). Second, the implantation of genetic characteristics for disease resistance should allow higher levels of production stability with a lower use of costly purchased inputs. Third, it may be possible to make varieties more tolerant of adverse growing conditions, in particular cold and salinity. The latter may be of great future importance for the large irrigated areas where salinity is proving difficult or costly to control. And fourth, the issue that has received perhaps most public attention, the possibility that non-leguminous crops may be induced to fix their own nitrogen from the atmosphere, creating ammonia which they then use for their own growth as an alternative to purchased nitrogenous fertilizer. Researchers all emphasise caution in how long it may take to develop field crops of the main grains with this characteristic. "Ten years" is usually quoted, indicating a comprehensible period of time but one for which the speaker will not be called to account. Most recently, agricultural researchers in Australia believe they have induced wheat to fix nitrogen (Beardsley (1991).) The researchers believe that with selective breeding and genetic engineering, high yield crops less dependent on chemical fertilizers may be achieved in ten years. The cost-reducing potential of this is enormous.

What is the impact of all this? The effect of technology of increasing total production, and in reducing costs, has been enormously beneficial to many economies and groups within them. But it is striking that in terms of the three problems enumerated at the start of this paper, technology directly addresses only Problem (iii). Technology tends to exacerbate Problem (i), the tendency toward oversupply for some primary commodity exports.
Technology and Problem (ii), overdependence on a few primary commodity exports, have a mixed relationship. In the first place, technological change to increase the supply of these particular commodities worsens the problem. But, second, change which reduces the cost of production and releases key resources for the production of something else in the economy will be beneficial to the producing economy --- unless the lower cost of production

raises profitability and in the short term at least induces investment to increase production and thus lowers price. Third, the critical issue is whether technology or other factors open up new lines of production, whether within primary commodity sectors or in industry. If so, the process of diversification may be helped.

D. Effects of technology on the demand for commodities.

The strength of demand for traded commodities depends principally on per capita incomes and total population in consuming countries, and income elasticities of demand for the commodities. At the most general level, to the extent that technology is a source of international economic growth, it promotes aggregate incomes and demand, but the situation varies greatly between different regions of the world. In the developed countries, incomes rise, but elasticities of demand for many commodities are now low. In many developing countries, the long-term prospects for demand are stronger: income growth is variable but in aggregate higher than in developed countries, and elasticities of demand for commodities are higher. But in some of the least developed countries, per capita incomes are stagnating, and these countries offer little prospect of strengthening the demand for internationally traded commodities.

There are three main effects of technology on patterns of demand for commodities.

(i) Technology can lead to the substitution of:
  (a) one commodity for another.
  (b) recycled for new materials.

(ii) Technology leads to increased efficiency in material use in the processing and manufacturing stages.

(iii) Technology creates new manufactured goods which have low commodity content.

These effects can be seen in many industrial processes. In the US automobile industry (which accounts for 15 to 20% of the steel used in the US economy), simultaneously, fewer traditional commodities are being used and new materials and speciality metals are replacing steel (Larson et al, op.cit.). The average weight of vehicles fell between 1975 and 1985 from more than 1700 kg. to less than 1500 kg. The fraction made up by iron and steel fell from 81% to 69% and the proportion of aluminium and plastic rose from 6% to 11%.

In parallel with the low income-elasticity of demand for commodities which has been noted in the main developed country markets, technology is creating new possibilities for spending by consumers which involve little inputs from commodities. The new products and services are either not traded internationally, or are produced by already-developed countries or modern sectors within newly-industrializing countries. They offer comparatively few opportunities to some of the least developed countries where, for reasons of lack of human skills or key infrastructure, the immediate production possibilities are fewest.

The effect of technological change on Problem (i), the weak demand for traded primary commodities, is not a happy one from the perspective the exporters. While not losing sight of a potential indirect benefit --- that technology might contribute to a process of rising incomes and hence higher demand --- the direct effects appear principally to be reducing the commodity-content of the goods and services on which incomes in the higher-income countries are spent. Over time, demand will weaken.

E. The adoption of technology: country differences.

Different countries will be differently affected by the impact of technology on production of and demand for commodities. This does not just apply to distinguishing the importers from the exporters, but also within the group of exporters. In particular the question arises of which exporters are going to be better placed to take advantage of the possibilities technology offers and to avoid being the losers. As the discussion of inelastic demand indicated, some can do well ---but at the expense of their competitors.

The concept of adaptive capacity (developed by T.W.Schultz) is useful in this context. It refers to the ability to change production patterns, technology, skills, marketing strategies, etc., in response to changing market conditions. In countries where adaptive capacity is weakest, the likelihood is greatest of being outcompeted in world markets, of being unable to diversify economically, and of progressively losing comparative advantage.

What are the factors determining adaptive capacity? There are several relevant factors:

(i) Institutional capacity for technology. There are three levels. The lowest is in those countries in which technological innovation is largely based on importation, with little modification to suit local conditions. Most of the least developed countries are in this group. The second, the largest group perhaps, is those countries which have a significant capacity for adaptation for local use of technology developed elsewhere. Third, there are the most developed countries in which basic research and development, which does not have immediate commercial application, is undertaken.

(ii) Human resources. Institutional capacity is an aspect of the wider issue of the adequacy of educational levels and skills. The ability of a workforce rapidly and flexibly to adopt new enterprises and working practices is at the heart of the adaptive capacity of an economy.

(iii) Government policies and investments also influence the speed and direction of technological adoption. This may be through affecting relative factor prices (e.g. capital may be made cheap through foreign exchange overvaluation or interest rate policy) or explicit decisions on particular investments, e.g. the development of a capital intensive shoe factory rather than many small shoemakers, or the provision of public services (e.g.agricultural extension)

(iv) The level of development of the private sector. Much technological development occurs through private sector investment in research and development in expectation of a profit or through transfer by multinational corporations. If this is to occur, a set of public policies will have to be in place to promote it. These policies are both national and international. A key development for agricultural technology was the patenting of a genetically engineered mouse in the US in 1988. Since then patents have been granted to cover herbicide-resistant cotton, insect-resistant tobacco, and virus-resistant potatoes (Barton (1991).) While these patents will no doubt strengthen incentives for research, questions arise of whether they will block off access by developing countries at affordable prices.

The key point is that some economies are much better off for technological potential than others. Those best able to use technology to their advantage have a major comparative strength in international trade. Those least able to are likely to be marginal now to the world economy, and to become more so in the future.

F. Who benefits?

The general point bears repeating that technology contributes to a process of growth and that the benefits from this, direct and indirect, can be substantial, but impossible to attribute unambiguously to technology as distinct from other sources of growth. Some more specific points can, however, be made.

The discussion of the effect of technology on both supply and demand sides for traditional commodities suggests that for many of these, particularly the renewable ones, technology tends to increase supplies and to weaken demand, with a consequent effect of lowering prices. Who benefits? Benefits are distributed in principle between producers, suppliers, processors and consumers. These will be diverse within any one country and between countries.

It is helpful to distinguish commodities internationally traded from those for domestic use.

(a) Internationally-traded commodities. In determining who benefits, much depends on the state of the markets and who controls them. Where exporters of primary commodities are competing for limited markets, the benefits will largely be passed to the consumers of the commodities --- who will in most cases be developed country importers. Grosso modo, producers for most of these commodities operate in a sufficiently competitive market not to be able to retain high levels of profits (unless protected by their governments). This has contributed to the long-term decline in world market prices which tend to depress the barter terms of trade for primary commodity producers. It is hard to avoid the conclusion that for these commodities, technology which has the effect of expanding supply will benefit the producer not at all. At one extreme is Ghana's Economic Recovery Programme of the 1980s which gave prime emphasis to expanding cocoa exports, leading to lower international prices and lower foreign exchange earnings.

For these same commodities, a technology that has the main effect of lowering the cost of production will have greater benefits for the producers, allowing them to maintain market share with a decreased use of productive resources and to reallocate those for other uses.

For commodities where both income and price elasticity of demand is higher --- pineapples and tomatoes were given earlier as examples --- increases in production can occur without depressing the terms of trade, and technology will have more unambiguous benefits for the producers.

Freely operating markets cannot, however, be taken for granted. Where governmental interference or other factors prevent the working of markets, the benefits of technological innovation will be differently distributed. In the case of the EEC, technology has led to a tremendous expansion of agricultural supply at domestic price levels well above market prices; for perhaps two decades this has worked to the great advantage of producers and perhaps even more to the industrial suppliers of the technology --- the agro-chemicals and equipment --- at the expense of consumers and tax-payers. The impact of expanded EEC production on world markets and on other importers and exporters varies by commodity, but is adverse for competing producers. This may be mitigated by measures, such as sugar quotas, designed to protect some third-world exporters.

(b) Commodities for domestic use. In the Indian Punjab example quoted above, technology permitted the cost-effective expansion of the supply of commodities for which demand on the local market was strong. Macro-economic benefits were considerable; the distribution of benefits at the micro-level between land-owners, tenants and hired workers was more complex and has been much debated. But among other effects the stimulus given to labour markets has tended to push up wage levels.

A comparison of the Indian and Pakistani sides of the Punjab illustrates that the extent and distribution of the benefits that result from technological change depend on the type of growth that occurs. At the basis of the differences between the two was the smaller modal size of holding and more equal size of holding on the Indian side. The technology adopted tended to be less capital intensive, with a higher local content and greater linkages with local engineering capacity. The pattern of growth tended to be more beneficial to wage-earners and to stimulating local industry.

In contrast to this example of growth, the failure to keep up the production of key commodities for domestic use --- unless this is a result of deliberate effort to pursue a strategy of comparative advantage and international trade --- is an economic disaster, as can be seen from many countries of sub-Saharan Africa. Macro-economic stagnation, declining incomes, and food insecurity result. The inability to develop and adopt appropriate technology is one, but only one, explanation for this stagnation. Zimbabwe provides an instructive exception: the sharp increase since Independence a decade ago in total production by smallholders of maize, the staple crop, is based in good measure on the fact that over 90% of them plant hybrid varieties. The availability of technology is a necessary condition for growth, but is no panacea, and has to be accompanied by a range of complementary policies, investments and services.

G. Conclusions.

In conclusion, one point should be emphasised. The great benefits of technology are by-passing the group of countries which are least developed and most dependent on a limited range of primary commodity exports. These countries are already marginal and are perhaps becoming more so. Their prospect, if they are unable to diversify their economies, is of being double losers: being faced by stagnating total demand in their export markets and by competitors more able to take advantage of technological innovation to raise production or cut costs.

There is no simple solution to their situation. Actions for their own governments and the international community should include some or all of the following.

(i) to support institutional capacity for technological development;

(ii) to promote economic diversification into export activities with better prospects;

(iii) to ensure adequate production of commodities for domestic consumers and industry, and in particular to stimulate linkages with other sectors; and

(iv) to avoid policies --- such as form part of some structural adjustment programmes --- which increase dependence on export commodities with poor prospects.

Finally, there is a strong case for complementary measures to improve the terms of access by developing countries to world markets. The dismal record of commodity agreements is discouraging; but the alternative, of benign neglect of the interests of third-world commodity exporters, condemns them to the probability of persistently low export earnings, punctuated perhaps occasionally by short-lived booms. Technology will do nothing to avoid this.

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Annex VII

HOW CAN AN ENABLING ENVIRONMENT BE CREATED TO STIMULATE THE CONTRIBUTION OF THE COMMODITY SECTOR TO DEVELOPMENT?

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INTRODUCTION

Despite the importance of international trade to world economic progress, it must be recognized that the international economic environment has brought mixed fortunes to the developing nations, especially during the last decade. As the volume of world trade has increased, manufactured goods have become the most rapidly growing component of that trade, far outstripping the primary commodities.

Since 1900, relative prices of primary commodities have shown a steadily declining trend at an average of 0.5% a year (0.6% for non-oil primary commodities). Conditions were at their worst in 1985/86 when prices in dollar terms fell 13.1% below real prices.

If these developments are permitted to continue, the gap in the ability to benefit from foreign trade between the advanced countries - generally the industrialized nations on the one hand, and the developing nations - generally the agricultural nations - on the other hand, will not shrink but will grow even larger.

We must not forget, that although trade is not yet of great importance to the developing nations (in 1965 and 1987 it amounted to 12% and 14%, respectively) primary commodities continue to be an important and dominant factor tying most of the developing nations into world trade. For this reason, their ability to profit from international trade in support of their economic progress is dependent mainly upon trade in primary commodities at reasonable prices.

Unfortunately, experience has shown that the acceleration in economic growth and world trade in the last decade did not have a major favorable impact on commodity prices. The producer price systems have been practically abandoned and a tendency towards instability is spreading not only to semi-processed but also to a number of finished goods. Due to this, many developing countries not only have been unable to benefit from international trade, thus promoting economic progress, but many have even become unable to service their debts.

This situation has driven many developing countries to gradually reduce the role of primary commodities and to enter into manufacturing industries by resorting to an import substitution policy. Those developing countries which have taken this road have relied generally on domestic consumption and on the creation of at times excessive protective barriers, resulting in the abandonment of principles of efficiency which are a particularly necessary factor in maintaining competitiveness. In the past, the protective walls were effective because at that time the discipline of GATT was not strong enough to overcome them. Many of the developing nations which arose subsequently faced difficulties in establishing protective barriers because the scope of GATT had broadened, enabling it to force the developing nations to adhere to the same GATT rules which applied to the developed nations. However, if we carefully study the negotiations held to improve the regulations and the discipline of GATT, it becomes rather obvious that many areas critical for the developed nations had been safeguarded ahead of time quite in contravention to the rules of free trade which comprise GATT's main objective.

Matters of critical importance to the developed nations continue to be protected even in the current meetings of the Uruguay Round. In the meantime, the problem of primary commodities, particularly tropical commodities, which the developing nations had expected to be one of the early results of this Round, in fact has been discussed only incidentally and not treated as a major issue.

In this connection, UNCTAD may be the only organization that offers hope as a countervailing force to prevent the developing nations from establishing some form of cartel to promote their interests. These one-sided efforts do not represent an ideal solution and will be even more destructive to the overall situation, especially to the developing nations as a whole.

UNCTAD, which in the past has demonstrated its capacity to create an atmosphere of togetherness through concerted and committed action by its successful introduction of the Global System of Trade Preferences (GSTP), may also have to handle on a special basis this problem of primary commodities.

For this purpose I will present my observations on the market and investment aspects relating to these commodities.

MARKET CONSTRAINTS

One of the aspects of the commodities' trade which is not handled as it should be is the issue of prices. It is through prices that a part of the economic progress achieved through international trade is channeled finally to the developing nations as the producers of commodities.

As already touched upon above, during the last decade commodity prices fell to their lowest point in the years 1985 - 1986, and even though there were improvements in 1987, the aggregate earnings of non-oil primary commodity producers were only 5% above the 1980 level. Aggregate earnings of manufacturing exports, on the other hand, increased nearly 85% above 1980 levels.

It is true that forecasting of commodity prices is always very difficult, not to mention the great variability in the prices of individual commodities. Without intervention in the private market, the balance in the commodity price forecast must always be on the down side. Any upswing in the price of commodities will be relatively weak and delayed.

Even for those developing nations which like Indonesia are rich in various natural resources, and in the last ten years have successfully developed their industrial sectors, the role of commodities and agriculture generally continue to be of great importance. Approximately 80% of Indonesia's population of 180 million still live in rural areas; 54% work in agriculture and only 16% live in industrial areas. For Indonesia the level of income from the agricultural sector continues to be a problem because the gross domestic product per laborer in the agricultural sector averages at about Rp. 860,000 compared to Rp. 4,300,000 in the industrial sector, as a ratio of 1.5. For this reason the solution to the problem of economic prosperity in the developing nations must always include the problem of commodity prices.

I doubt whether the Common Fund can independently perform its original role as a stockpile banker in order to support commodity prices. Similarly, I even doubt that International Commodity Agreements alone can push for increased trade in commodities. Such agreements are generally designed rather to restrict trade in order to raise and/or stabilize prices. Historically, there is no evidence that International Commodity Agreements can be used to increase export prices for any significant period of time.

INVESTMENT CONSTRAINTS

In the developing nations the relocation of industries always becomes an important issue for reducing imbalances in the distribution of the fruits of development among the various regions within one country; similarly, the world economy must encourage industries using primary commodities as raw materials to relocate to the developing nations.

In fact, to ensure that this relocation will carry real benefits, the developing nations must be able to provide infrastructural investments, education/human resource developments and incentives for pursuing that country's competitive advantage in the international market.

It is very clear that the share of primary commodity exports of the developing nations exported in the form of manufactured goods is still very small, not even reaching three percent for agricultural commodities. This implies that the processing of these primary commodities is still mainly carried out in the developed nations.

It is also a fact that the governments of the developed nations generally have continued to create obstacles in the form of escalating import tariffs on these primary commodities. In other words, the developed nations are still unwilling to support efforts to relocate industries using primary commodities to the developing nations. The relocation of industries to the developing nations which they have supported thus far is limited to industries which create pollution in the developed nations and is not yet based on the principle of co-operation for a more equitable division of the fruits of international trade. In this respect, continued co-operation from major industrialized countries, particularly in the resource-based sector, must be encouraged.

It is easily understandable why primary commodities were exported in raw form during the initial stages of bilateral and international trade. The many problems of technology, capital and quality demanded that the finished products be made by the user nation which was more advanced than the nation producing the commodity. The development of organized markets in the consumer countries was intended, among others, to protect production against the uncertainty of the arrival of ships transporting the commodities in question, moreover, when the available tonnage had not yet reached its present volume.

At that time, the common interest in the benefits from international trade had not yet reached present levels. Current conditions which have prevailed for a long time, also have contributed to the difficulties in handling the problems of primary commodities, including the relocation of industries in sectors using these primary commodities.

THE NEED FOR CONCERTED AND COMMITTED ACTION

It is extremely unfortunate that many developing countries have adopted policies significantly reducing the ties between their domestic markets and the international economy. Because of their experience which often proved to be disappointing, many developing countries have safeguarded their domestic industries with high tariff and non-tariff barriers as protection against competing import products.

Such measures have been effective, in fact, especially in non-agricultural commodity industries such as electronics and textiles/garments which are labor intensive. This is generally done on the basis of the principle of import substitution, if necessary, by automatically prohibiting imports as soon as a product is domestically produced.

Several of the developing nations which have done this successfully, are now the world's main producers of these manufactured commodities.

It is also for this reason that the developing nations are at present for the first time very actively participating in the GATT Uruguay Round in the hope that the results of the progress already attained will not be held back by the developed nations which even now are becoming more protective. In fact, the developed nations do not need to fear the developing nations, because progress will always be open to new and more advanced technologies generally dominated by the developed nations. The principle of the flying geese would appear to be also applicable.

The disparity between the level of economic progress in the developed nations and that in the developing nations, particularly those exporting primary commodities, is consistently continuing to increase.

In this connection, it is high time that UNCTAD, which in the past processed concrete trade benefits for developing countries in the generalized system of trade preferences, makes another attempt toward one concerted and committed action by all member countries by looking at the commodities issue as one integral package.

International Commodity Agreements must be considered in combination with organized markets, the Common Fund and with the relocation of industries using primary commodities as raw materials. The attempts of the developing nations to create an organized market in a number of selected developing countries must be given real assistance. Later, these markets must be tied to each other in close co-operation. It is in this way that the production sector can be effectively and directly (not slowly as it is at present) linked with the market. In the United States, the wheat market always receives attention from the country's wheat farmers and it serves as an indicator for them. The coffee market in the advanced countries, however, only attains the attention of the traders of the producer countries and only the losses reach the farmers because they have been too slow in anticipating them. Experience shows that many countries do not survive long and many fall victim to the organized markets of the developed countries.

The problem of industrial relocation must also be closely tied to efforts to increase the consumption of the same goods in the developing countries; this in the end will help balance supply and demand which continue to play a role in price formation. The development of large scale investment by multinational companies in primary commodity industries in the developing countries will considerably reduce production costs which in turn will increase demand in these developing countries. Certainly these efforts must be followed by the elimination of the escalating system of protection in the advanced countries so that marketing is not slowed down.

I believe that the combined discussion of the five aspects of the primary commodity trade, that is: International Commodity Agreements, organized markets, the Common Fund, the relocation of primary commodity industries, and the elimination of escalating import tariffs for primary commodities, will lead to the creation of improved commodity trade and will promote assured availability of supplies. Commodity issues should be addressed jointly, and we must adopt an interactional approach which takes into account these five aspects.

We must not allow the development of a situation in which supplies of non-oil primary commodities are always abundant and safeguarded simply because the poor countries have no alternatives. What we need now is a freer, liberal and better managed trade system for commodities.

Annex VIII

HOW CAN THE BALANCE BETWEEN WORLD SUPPLY AND DEMAND FOR COMMODITIES BE IMPROVED?

Paper prepared by Kobena ERBYNN, Chief Executive, Ghana Investments Centre

A. Short History on International Co-operation in Commodities

The major export commodities of developing countries are either agricultural commodities (including sugar, tea, cocoa, coffee, grains, meat and dairy products, vegetable oils, cotton, jute and rubber) or extractive commodities (like gold, diamonds, tin and timber). Generally, there is a tendency towards price instability in commodity markets; with respect to agricultural commodities, the prospect for market instability is even greater since supplies normally depend upon unpredictable weather in the South and demand is dictated by the vicissitudes of the economies of the countries in the North.

In the post-World War II era (up to about 1970), it was generally believed that the production capacity (and hence supply) was more than adequate to meet effective demand for most agricultural commodities. The new scientific methods of plant and animal breeding which had brought out high-yielding varieties, the improved cultural practices involving proper planting or animal-rearing procedures; use of fertilizers and scientifically-formulated animal feeds, use of tractor and other farm machinery - all these had contributed to immense increases in crop and animal yields, and had lulled everyone into believing that further improvements in farm technology could sustain supply in the long term. The price instability of commodity markets was therefore seen as the result of inadequate demand for the products of the commodity exporting countries.

The low commodity prices of this period (and the belief in continued adequate supplies) made consumers of the commodities unwilling to agree to any trading arrangements that would "artificially raise" commodity prices. On the other hand, the low prices of agricultural commodity exports (as raw materials) relative to prices of imported manufactured goods - and the associated large fluctuations in the commodity prices - contributed in no small measure to the instability in the revenue base and the balance of payments situation of the commodity-exporting developing countries. This lack of common purpose (between producers and consumers of internationally-traded commodities) in dealing with commodity prices was the principal source of friction between the developing (producing) countries and the industrialized (consuming) countries.

Because of the strong bargaining power of the industrialized countries, efforts at stabilizing the world commodity prices through international (consumer and producer) co-operation were naturally geared towards the thinking of the consumer countries. It is not surprising therefore that the discussions on commodity prices during the post-War period generally concentrated on finding outlets for the products and on price-stabilization measures. For some commodities, preferential arrangements were made for the exports of developing countries into the industrialized countries.

The major policy initiatives of this post-War era resulted in the establishment of International Agreements for Wheat (re-negotiated, 1949), Coffee (1962) and Sugar (1966, renegotiated) and in intensive inter-governmental consultations on several individual commodities (including cocoa, rubber and fibres) under the aegis of the UN/FAO and UNCTAD.

In the 1970s, however, many of the post-War beliefs in commodity prices (that the collective effort of primary commodity producing countries to improve the conditions of their markets and hence raise commodity prices was impossible) began to crumble. The unilateral increase of oil prices in 1973 by OPEC (Organization of Petroleum Exporting Countries), the high rates of economic growth in virtually all the OECD countries and the increasing rates of inflation throughout the seventies, led to very rapid growth of demand for primary commodities. Almost all commodities benefited from these high prices as the industrialized countries for the first time became concerned about the possible depletion of the world's resources.

This period (especially 1972 to 1975) saw the general commodity price boom (with favourable terms of trade) and its attendant shift in power relationships between industrialized and developing countries in favour of the latter. The consuming industrialized nations were afraid that the commodity-exporting countries would use their new-found economic power not only to increase their foreign exchange earnings but also to consolidate their control over raw material supplies through formation of additional OPEC-type commodity cartels as well as to assert themselves more effectively in international political form. During this period, therefore, consuming countries were more willing to discuss arrangements that would lead to more-meaningful international co-operation in commodity prices that are remunerative enough to ensure continued (future) supply to the world market.

Thus, most of the discussions on commodity policy during this period were aimed at ensuring commodity supplies through commodity stocking arrangements, price stabilization at remunerative levels and expansion of production. International action was also to consider preferential treatment for the exports of developing countries, greater technical and financial assistance to developing countries to improve their food and commodity supplies, and the inclusion of agricultural products in the GATT multilateral trade negotiations.

The high prices of the mid-1970s attracted new investments in agricultural commodities; by the end of the decade, there had been considerable expansion in production among old producers (for example, coffee and cocoa in Côte d'Ivoire, cocoa in Brazil, rubber in Malaysia) whilst new countries had become serious producers (e.g. cocoa in Malaysia). The measures undertaken in the mid-1970s to reduce the high double-digit inflationary rates in industrialized countries resulted in a considerable slow-down of economic activity in Europe and North America at the turn of the decade. These two factors led to a collapse of commodity prices in 1978/79 into the early 1980s. The emergence on the world political scene of Prime Minister Mrs. Margaret Thatcher (1979) of the United Kingdom and President Ronald Reagan (1980) of the United States of America ushered in an era of unabashed capitalism in trade and industry, both domestically and internationally: Because of the strong bargaining power of the two countries (but especially the USA as the leading consumer of many of the internationally-traded commodities), commodity policies throughout the 1980s were formulated against the background of the strong Western principle of "free market" mechanism, with very little room for welfare considerations in business matters. The Thatcher-Reagan era (later joined by Chancellor Kohl of the Federal Republic of Germany) presented the greatest challenge to international co-operation in commodity arrangements. Whilst producers, now facing very low world prices, were arguing for higher prices on the basis of some veiled welfare considerations like the need to stabilize prices at remunerative price levels, commodity consumers of the Northern Hemisphere were pressing for lower commodity prices as a means to achieve the long-term free-market equilibrium price which alone could bring stability to the commodity market by improving the balance between world supply and demand for the commodity.

With the exception of a few years (1985/86 for cocoa, 1986/87 for coffee, 1988 for sugar), tropical agricultural commodity markets remained generally depressed throughout the 1980s because of chronic imbalance between world supply and demand. This structural over-supply (for most commodities) coupled with the determination of the consuming countries to stick to free-market principles in commodity trading, resulted in lack of serious progress in the implementation of international commodity agreements/arrangements during the 1980s.

As at the beginning of the 1990s, the international commodity agreements which had economic provisions meant to help stabilize market prices at agreed price levels, have either collapsed (like tin in 1986) or have remained dormant with the economic provisions suspended (like coffee in 1987 and cocoa in 1989); only natural rubber (INRA, renegotiated 1987) still operates economic clauses using the buffer stock mechanism. The sugar agreement (renegotiated in 1987), the wheat agreement and the new commodity agreements involving Jute (1982) and Tropical Timber (ITTO, 1986) have no economic provisions.

B. Future Role of ICAs

The structural over-supply, which has caused the demise of ICAs with buffer-stock mechanisms (like Tin and Cocoa) or with export-quota system (like Coffee), still continues to plague the commodity market. The resulting low commodity prices leading to reduced revenue inflows into the developing countries, as well as the general slow-down of the world economy since 1989 and the high rates of inflation - these factors together reduce the ability of commodity-exporting developing countries to service their external debt and also reduce their capacity to import their food and equipment needs. The outflow of scarce funds for external debt servicing, supply shortages due to drought or civil disorders and inability to purchase the needed imported food because of low revenues from commodity exports are beginning to cause consternation among populations in several developing countries about the possibility of a widespread hunger or famine. There is therefore the need for the international community (producers and consumers) to institute measures that would strengthen international agreements/arrangements aimed at stabilizing commodity prices with a view to increasing the export earnings of the developing commodity-exporting countries.

STABEX: Revenue stabilization mechanism

An international co-operation measure which has helped stabilize the revenue earnings (not the market price) from a developing country's commodity exports is the STABEX mechanism which is practised under the LOME Conventions (Lome I to Lome IV) binding the twelve (12) European Community (EC) countries of Western Europe and some African, Caribbean and Pacific (ACP) countries. This mechanism obviously does not yield as high revenues as the price-stabilization measures like buffer stocks or quotas. However, it satisfies the consumer's criterion of allowing "free market" interplay between demand and supply of the commodity; it is easier to monitor and cheaper to operate. For the producer, there is an assurance of some "claw-back" of money from the STABEX system if the market price should fall uncomfortably low; the producers and consumers do not have to haggle over what "floor price" should represent a remunerative price.

Under an international commodity agreement/arrangement, where producers and consumers both contribute towards the stabilization fund, the consumers consider the "claw-back" money paid to the producer as a subsidy or an indirect method of paying prices higher than the market forces would dictate. In an already structural over-supply market, this "extra" payment to the producer is bound to send a wrong signal for further increases in production. For the producer, on the other hand, the actual price obtained plus the "claw-back" payment may, together, still represent a selling price far below the cost of production, which fact will be considered unpalatable by the producer.

Thus, the STABEX mechanism, whilst it works well on a "state-to-state" (or "political") basis, will be completely out of place as a stabilization mechanism in an ICA which puts trade (and not politics) in the centre stage.

Quotas Versus Buffer Stock Mechanism

There are two principal mechanisms traditionally employed as price-stabilization measures in ICAs - the quota system which seeks to withhold excess supplies from the market (like, Coffee 1962) and the buffer stock system which buys and stores excess supplies (thereby removing supplies from the market) and releases the stored supplies onto the market in times of short supply (e.g. Cocoa 1980, and Natural Rubber 1989). Cocoa agreement (1986) contains both mechanisms - buffer stocks (maximum of 250,000 tonnes) supplemented by a more transparent variant of quotas.

In times of structural over-supply like now, quotas are more effective for sending the right signals to producers to curb production. However, the problems of lack of transparency in secondary (or non-agreement) markets, constant bickering among large-volume producers and fast growing/new producers in respect of market shares, as well as the expensive monitoring procedures, make quotas a nightmare for both producers and consumers. In 1988 a number of importing countries raised serious questions concerning cut-price sales of coffee by member producing countries to non-member importing countries. Again, for over twenty years (1963 to mid-1980s), the International Coffee Agreement had appeared to be successful but "this was largely achieved through the self-imposed restraint of Brazil which held large stocks and also reduced its shares in world production and exports considerably over time". The Brazilian coffee policy allowed several small producers (many of them newcomers to the coffee market) to expand their exports. In the late 1980s when Brazil decided to stop further erosion of its market shares, members of the Coffee Agreement could not resolve the issue of new quota distribution.

The buffer stock mechanism is an effective price-stabilization tool when the market is nearly finely-tuned (with supply and demand deviating slightly as a result of seasonal production factors) and normal price fluctuations are small on either side of the "notional" long-term equilibrium price. However, during periods of structural over-supply when price is on a one-way trend downwards, the buffer stock mechanism is of little help as the buffer stock purchases make little impact on prices - reference the last buffer stock purchases in February 1988 under the Cocoa Agreement, 1986.

Under the present circumstances of general over-supply, it is difficult to imagine any new negotiation or re-negotiation of an ICA that would incorporate only the buffer stock mechanism as a means of stabilizing prices. The price-adjustment mechanism that will need to be introduced in order to "quickly" bring supply and demand into reasonable balance will be such that producing countries will find it hard to swallow; and without such a fast price-adjustment procedure, it is doubtful if consumers will be interested in a buffer stock as an efficacious tool at all. Nevertheless, the buffer stock mechanism can still become a useful device under certain conditions, even in a chronic over-supply situation.

The Common Fund for Commodities has a direct role to play here. Buffer stock operations are a very expensive business in a situation of structural over-supply. The First Account of the Common Fund was established for the singular purpose of financing commodity stocking.

From the above analysis, it is obvious that barring any catastrophe or economic disaster, the traditional instruments used to prop up prices by ICAs will not be of much help in the 1990s. What new role therefore should the ICAs assume in order to make producers and consumers continue dialogue at the international level and keep their interest high in ICAs?

First, there is the need to re-focus the ICAs back to their original primary objective of (i) preventing excessive fluctuations in commodity price; and (ii) ensuring efficient adjustment between world production and consumption. All other goals of ICAs should be secondary and subservient to these two. ICAs may or may not have economic provisions, which are normally associated with objective (i) above. Generally, however, producing countries are more interested in an agreement with economic provisions which operate in times of low prices rather than in times of high prices. To be attractive to consumers, an agreement must also incorporate provisions which give adequate countervailing power to the consumers. Hence, the ICA should be capable of moderating short-term price fluctuations on the upside as well as the downside. Objective (i) above is usually achieved by the use of a buffer stock mechanism alone, or export (and/or production) quotas, or both (buffer stock followed by export controls). Objective (ii) is facilitated by the Organization's Secretariat's role as gatherer and distributor of data on conditions in the world market, which data help make the market more transparent. In the 1990s, because of the spectre of structural over-supply of commodities generally, I do not see the producing (developing) countries being easily pursuaded to abandon the advantages inherent in objective (i) - reduction in price fluctuations - and to rather agree to a commodity arrangement (or agreement) that only provides a useful forum for producers and consumers to discuss world market problems and exchange market information on how to bring production and consumption into an equilibrium in the medium to long-term. Whilst it is true that some agricultural commodities (like bananas) do not lend themselves easily to stocking arrangements, nevertheless producers of most commodities will not want to be party to an ICA without economic clauses; producers recall the increasing frustration in the 1960s over the inability of the developing countries to obtain anything more than ineffective (and, at times, sterile) discussion of commodity problems at a time when action was required on depressed world commodity prices.

For any new ICA (with economic provisions) to be successfully negotiated in the 1990s, the producers should understand that consumers will use their current greater bargaining power to insist on (a) a clear definition of objectives; hence, no humanitarian or welfare objective that uses the ICA as a resource transfer mechanism; (b) stabilizing commodity prices around a long-term trend, and hence the need to have a market-oriented price adjustment mechanism; (c) an efficient resource-allocation mechanism that allows the more efficient, lower-cost producers to obtain a greater share of the market, and (d) measures to correct the underlying structural market imbalance. Fortunately, for world co-operation, many of the important developing country commodity exporters have, since the mid-1980s and especially over the past four years, undertaken self-imposed or World Bank/IMF led structural adjustment programmes designed to rehabilitate the country's economy and point it towards sustainable economic growth. These programmes contain large doses of privatization of state enterprises and measures to improve the environment (political, social and economic) for private direct investments and for private sector development. These developing countries can therefore relate better now (than before) to these private-sector market-oriented demands of consumers.

As a quid pro quo the consumer countries (mostly in the North) must be prepared to give serious consideration to some of the age-old demands of producers which are often expressed as resulting from the "unfair (current) economic world order": stabilization of export revenues; improving access to developed-country markets for agricultural products and for processed products; and investments (foreign capital and technology) in more sophisticated commodity-processing plants and in diversification programmes away from commodities in structural excess supply. I do not expect the trade-focused ICAs to have direct new roles in resolving these "political" concerns; the discussion fora lie with larger multilateral organizations elsewhere, like GATT, World Bank/IMF and UNCTAD. However, each commodity ICA should contain provisions (or clauses) which attest to the determination of both producing and consuming countries to find appropriate short-term and long-term solutions to the commodity export problems of the developing countries. Further improvements in the IMF Compensatory Finance Facility and European Community's STABEX System which allow more developing country commodity exporters to convert their loans into grants, as well as rapid progress in the Uruguay Round of GATT negotiations on phased reduction in agricultural protectionism (through abolishing of farm subsidies or supports especially in the EC, the USA and Japan; and the reduction of tariff and non-tariff barriers for processed goods from developing countries) will increase commodity export revenues through more effective competition; this will not only make debt-servicing more bearable and leave some funds for infrastructural development, but also increase the capacity of the developing countries to climb out of their debt abyss.

C. Scope for Producer Action

What actions can the producing countries adopt unilaterally to improve upon commodity prices and revenues during this period of structural over-supply? The four options to be discussed involve either a reduction in supplies to the market or an expansion in the consumption and/or usage of the commodity. Three supply-management options are dealt with here whilst the demand-increase actions are discussed in the next section.

The commodity-exporting developing countries must learn to understand the basic ground-rules of the international market place; demand and supply together determine the commodity price; excess of supply over demand leads to a lowering of the price. In order to raise commodity prices above their current low levels, any producer action must result in reducing (or withholding part of) supplies going to the market under the supply-management options.

Witholding of Exports

The experiences of Brazil in coffee (1960s and 1970s) and Côte d'Ivoire in cocoa (1988/89) indicate that an individual exporting country - no matter how big or important it is for a particular commodity - can achieve very little on its own by withholding supplies from the world market. Similarly, even if the few "big boys" for any commodity decide to restrict market supply, these developing countries are bound to lose in the long run as their share on the world market slowly-but-surely declines.

This means then that there is the need for concerted action by all (or a sufficiently large number) of the producing countries to decide to curtail production and exports. The most common producer arrangement for restricting market supply is the "producer cartel". The producers of oil formed a cartel (Organization of Petroleum Exporting Countries, OPEC) and used it very effectively to raise and maintain high oil prices from 1973 into the early 1980s. Unfortunately for producers of agricultural commodities, the factors which made it possible for the OPEC cartel to operate successfully into the medium-term (including lack of readily-available substitutes and lack of alternative sources of production) do not exist for many other commodities.

Cartel efforts are not effective in times of structural over-supply - the withdrawal of 450,000 tonnes (representing about 18 percent of total world production) from the cocoa market in 1989 (not through a cartel) has not had any serious impact on cocoa prices. M. J. Bateman estimated that a total of 900,000 tonnes of cocoa needed to be withheld in order to have long-term effect on prices.

Since most of the developing countries depend upon only one or two commodities for between 20 and 70 percent of their foreign currency earnings (Brazil on coffee, Ghana on cocoa, Côte d'Ivoire on coffee and cocoa, Malaysia on tin and natural rubber, Nigeria on oil), even when cartel action can be advantageous, the countries are not in a position to withhold any meaningful quantities of the commodity because of high spoilage due to poor but expensive storage facilities, ineffective enforcement programmes and, above all, the need for foreign currency for the country's import bill and debt service. Moreover, in the medium to long-term, normal market forces do result in alternative production - new production areas suddenly spring up, small non-quota producers take advantage and increase output considerably, and artificial/synthetic materials appear on the market - which tends to offset the cartel efforts.

In conclusion, not only are the interests of producers jeopardized (through cartel actions) collectively by risking the loss of long-term markets (to synthetics) for short-term gains, but also the commodity-exporting developing countries (with high debt-to-export earnings ratio) cannot afford to withhold exports for long because they need the income.

Supply Rationalization

The knowledge of the production cycle for a commodity may be used to develop strategies for increasing or decreasing market supply. For grains and bananas whose production life is one year or less, excess supply in one year may be corrected the next year through reduction in acreage planted (with or without state payment for land taken out of production for the particular commodity) or curtailment of use of essential farm inputs like fertilizers and insecticides.

For long-life tree crops (including cocoa, oil palm (for vegetable oils), and rubber), new plantings depend not only on the previous year's world output and price levels but also on the expectations of future demand-supply relationships. Most farmers and policy makers in the developing countries tend to have "positive, same-direction" expectations; that is, they expect high prices of today to continue several years into the future. Hence in periods of high prices, Governments in (or relevant authorities of) producing countries do initiate (or are persuaded to undertake) new output-expansion programmes (like Côte d'Ivoire and Malaysia in cocoa in mid-1970s), whilst investment is discouraged when the price hits the bottom of the trough. In terms of supply management, these actions by the governments do aggravate the cyclical instability.

As a credible mechanism for rationalizing supply in the medium to long-term, all producing countries should agree to undertake counter-cyclical measures by "curtailing new plantings during price booms and promoting rehabilitation schemes only" during periods of excess supply. This policy should not be too difficult for producing countries to implement since it does not lead to an immediate sacrifice of much-needed foreign currency and, if adhered to by all producers, no producing country needs suffer loss of market share.

Another rationalization of supply measure (in the short-term) involves the processing of an agreed quantity of the commodity and withdrawing it from the market by storage. To be effective, a sufficient number of producing countries must contribute to the withholding stock. Where a participating country does not have enough processing facilities, the raw materials may be shipped to another country - reference is made to an unsuccessful attempt to have 130,000 tonnes of cocoa from Côte d'Ivoire processed in Brazilian factories. The processed product will last longer in storage.

The major drawback with this option for producers is that storage in the tropics is still expensive even in processed form and, moreover, the developing countries cannot afford to withhold the processed goods for long since they need the revenues from their export sales.

The producers may decide to withhold an agreed quantity (or percentage) of current world supply of a commodity and process this into new products, for distribution outside the traditional market sources of that commodity. What are the prospects for such a producer action? First, it dependes on the availability (through research findings or otherwise) of technical know-how and equipment for transformation into the new products - for example, processing of cocoa into edible vegetable oil or alcoholic and non-alcoholic beverages. Second, is there an effective demand for this new product? Will it be in competition with another commodity in excess supply and hence contribute to further depress that (other) commodity's price?

If the new product is to be sold, then its price vis-à-vis existing product(s) in its class will be important. Is cocoa-butter oil likely to be cheaper than vegetable oil from oil palm, coconut or groundnut (peanut)? The answer will very likely be no, otherwise (except for new technological breakthrough) the situation would have been exploited long ago.

The vegetable oil could be given free of charge to consumers in or outside the country where it was processed, provided transport and other costs are covered. The argument for this case is that the resultant cocoa price (for this and subsequent years) will more than make up for the loss of the value of the processed raw materials.

In order to maintain relative market shares, there should be a sufficiently large number of producers willing to participate. A country's need for foreign currency may prevent it from agreeing to the scheme; it may decide to sell, for example, the total quantity of its cocoa beans at a low price rather than to risk an uncertain (future) higher cocoa price for a smaller quantity. The choice of the "new product(s)" - very likely in favour of product(s) that may be competitively priced for sale - may also threaten to stymie this option.

Alternative End-Uses

As indicated above, the search for alternative uses of a commodity invariably will lead to competition with other commodity/commodities - for example, the conversion of cocoa into cocoa butter (vegetable) oil.

The main points to consider here relate to availability of research work, ability of the new product to compete price-wise with traditional products, and change in habits of the consumers. The scientific research work involved in identifying and preparing "new products" is such that development of alternative uses for any commodity cannot be considered as a short-term proposition. In the medium to long term, however, the prospects may be good, but the amount of money involved in a research project is such that cash-deficient producers may find it too much to bear alone; this research activity lends itself to a co-operative (or joint) contribution from both the producers and the consumers.

We have also seen that at least in the short-term, the price competition is likely to be lost by the new alternative end-use of a commodity. In the medium or long term, further refining or fine-tuning of the processes may result in advantageous price competition or in the new product carving a niche in the market for itself.

In the short term, under pressure to quickly find alternative new end-uses for a particular commodity because of the persistent over-supply, the prospects for producer action are very small indeed because of price competition with traditional products and difficulty of changing consumer habits.

D. Commodity Demand

Generally, the existence of an excess supply situation implies that the total effective demand for a particular commodity has been fully satisfied, leaving a surplus supply in the market place. This surplus supply finds expression (in a free market) in the lowering of the commodity price.

The main markets for most of the primary commodities are the developed countries: Western Europe and North America, with Japan featuring strongly in the minerals. For cocoa and coffee, the high per capita consumption in these Western developed countries implies that there is little room for expansion of demand. In fact, in some countries (like the UK for cocoa), demand is approaching saturation level. The low income and price elasticities for the two commodities mean that price increases will increase producer incomes in these traditional chocolate and coffee consuming countries.

Japan, the USSR and Eastern Europe have a big potential for increasing their consumption of these tropical beverages because of their current low per capita consumption levels, whilst China is a giant yet to be awakened in terms of consumption of coffee and cocoa. In the 1960s Ghana "opened up" the USSR to cocoa consumption, but today the cost of promotion is so high that all producers of cocoa (not just one country) should bear the cost of a promotion drive into, say, China. Special sales (at much lower prices) could also be directed at China and other low per capita cocoa-consumption countries in the Mediterranean, the Middle East and South East Asia, provided that the low-priced cocoa will not re-enter the world market.

Similarly, for other commodities, small pockets of high per capita consumption are surrounded by several countries where consumption per person is low. Advantage can be taken by a concerted action of all producers (with the help of consumers, through consumption promotion programmes) to increase commodity demand substantially, at least in the medium-term.

Consumption may also be increased through the expansion into non-traditional areas or recently-developed usage areas - like pharmaceutical and cosmetics industries in the case of cocoa.

Finally, because of low per capita incomes and the need for foreign currency, most of the developing countries do not consume much (except for Brazil in the case of coffee) of their commodity exports. There is the possibility for expansion and consumption in local producing countries, not necessarily in the form consumed in the Western countries. For example, cocoa is consumed as chocolate in Europe and North America; but cocoa consumption may be encouraged in exporting developing countries of the tropics as a cold (non-alcoholic) beverage via cocoa powder.

E. Actions to Improve Commodity Supply-Demand Responses

A number of actions may be undertaken jointly by producers and consumers of a particular commodity to improve the price responsiveness of the commodity and hence to improve the balance between world supply and demand for the commodity. These international co-operation actions include:

(i) Agreement among the major industrialized nations on phased reduction of farm subsidies or supports at the current GATT negotiations - this will expose the high-cost producers in the developed countries (like sugar producers in the European Community) to competition from the more efficient food farmers of the developing countries, which will lead to a possible cessation of production in the industrialized countries, a consequential increase in demand for the reduced market supply, and hence result in a long-term improvement in the commodity's price revenue.

The IMF has recently observed that "the abolishing of farm supports by the EC, the USA and Japan would increase the foreign exchange earnings of the farm-commodity exporting countries of the developing world by US$ 50 billion, almost equivalent to the annual net outflows (for debt-servicing and other net payment) from the South to the North".

(ii) Agreement at the GATT negotiations on the abolition or reduction of tariff and non-tariff barriers ("a generalized system of tariff preferences") for exports of industrial/manufactured goods from developing countries, with special or duty-free preferences for the exports of the poorest developing nations. The US generalized system of tariff preferences and the free access to European Commission markets by the goods from the ACP countries are steps in the right direction, but these efforts need to be deepened and spread across the markets of all the developed countries. For example, multinational companies tend to build processing plants in developed countries which levy tax (or tariff) on processed commodity exports; this tariff by the importing industrialized country (for "protection" of investments or employment?) discourages more processing plants being established in the commodity-producing developing country.

(iii) The abolition (or phased reduction) of government intervention in the production and marketing of commodities in the producing/exporting developing country. The existence of state commodity boards tends to insulate the private farmers (who are the real producers) from the vicissitudes of the market place. The farmer's supply response to persistent excess supply is therefore muted; an increase in the state-determined nominal price (with or without input subsidies) is often mis-read as a signal for increased production whilst, in fact, the real price would have fallen in view of the depressed world market. Moreover, the price-stabilization function of the state commodity boards gets sacrificed quickly and the boards become a source of raking "extra" taxes from the farmers to the government coffers by a refusal of the boards to pay a higher percentage of the world market price to farmers in times of commodity price boom; hence, the supply response to higher prices is also not fully reflected in farmer's actions. In recent years, many producing countries have embarked on local supply management by either abolishing the state commodity boards (Nigeria's Cocoa Marketing Board in 1987, Brazil's Instituto Brazileiro do Cafe in 1991) or licensing new private marketing companies to compete directly with the state commodity board in order to force the board to operate more efficiently (as in Uganda in 1990).

(iv) Research to lower the cost of production of commodities (like textiles and natural rubber) which are under intense competition from artificial or synthetic goods. The lower production cost will allow the natural commodity to fight back for part (or all) of the demand cost to synthetics, and thereby improve the supply-demand relationships. The cost of such research work could be borne at least, in part, by funds from the Second Account of the Common Fund.

(v) Processing of the raw materials into more storable manufactured goods (for short-run withholding from the commodity market), the search for alternative (non-traditional) uses, and the giving-away of the processed commodity (like a free chocolate bar in every food package for the world's refugees) - all these options will help improve the commodity supply-demand situation even though not in any substantial or permanent manner, unless we hit a jackpot with the non-traditional demand.

(vi) Diversification in production, coupled with special private-sector credit schemes for investments outside the present commodity's area of operation. In times of structural over-supply, diversification into other products (not another commodity already in excess supply) helps to reduce production and market-overhang of stocks available (directly under the Second Account of the Common Fund or as part of the IMF Compensatory Finance Facility) to encourage developing countries to better manage their commodity supply problems through diversification. The International Finance Corporation (IFC, of the World Bank Group), the African Development Bank and other regional development banks worldwide should be roped into a financing arrangement which makes possible access to loans and/or joint-venture partners for investments in agricultural or non-agricultural projects involving the use of the land area no longer under cultivation of the commodity concerned.